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Guest Editorial

A Health Officer's View on the National Medical Care Program

WHAT is being said today about a National Medical Care Program seems to differ in only one respect from that which was heard 10 years ago. The statements are now more in detail and coming from more individuals. The fact that more people are willing to express their views on the subject is a wholesome trend. Unfortunately, however, too few have actually studied the various proposals. What is more significant is the fact that the objections voiced by the majority are not accompanied by practical suggestions or constructive criticism.

It would be presumptuous on our part to attempt a solution for a program which involves the scope of activity such as has been proposed in the numerous legislative proposals. The most that can be expected of any one individual interested in a National Medical Care Program is to request those who are selected to pass upon the practicality of this necessary undertaking, to bear in mind certain basic facts which are of concern to both lay and professional groups.

It is our impression that the discussion to date has been limited to but a fraction of the problem facing this nation. Furthermore, that for the most part the members of our Association are discussing it too much from their own point of view. It would be interesting to determine the unbiased feeling of the millions whose destinies in this instance we are attempting to guide.

Without any attempt to elaborate, certain facts are obvious.

(1) The subject deals with the very existence of one hundred and thirty-five million people who are now living and will continue to live under varying conditions, in both rural and urban communities. Therefore, any agreement reached in order to satisfy the necessary requirements of all must not be made to the exclusion of any, or to the benefit of a few.

(2) A large portion of our population finds difficulty in procuring proper medical and hospital care. This is true because too frequently the services and facilities are not available or uniformly distributed. Also, because too many individuals are too poor to buy this medical care.

(3) The needs are greatest in rural communities. This fact is frequently overlooked in discussing a nation-wide program.

(4) To date, private efforts to provide adequate hospitalization at minimum cost, and based on sound insurance principles have been successful more or less to protect less than 15 per cent of the nation's population. At this rate, it would take at least 50 years to provide coverage for all, assuming, of course, that there could be complete elimination of all medical and social indigents and that there would be a provision of 100 per cent employment. To expect such patience on the part of an ever growing, and an ever more intelligent population, appears to us to be wishful thinking.

(5) Blue prints of existing Medical Care Programs in other countries are available (they do not have to be followed). Many of these planned programs

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have failed to meet expectancy, because emphasis was placed completely on curative medicine. Ignoring the importance of preventive medicine today, in view of its rapid development since the turn of this century, will fail to meet the essential requirements. It is sincerely hoped that any plan which may be eventually adopted in this country will take complete cognizance of this specialty.

(6) Sound business practice thrives on good administration. Whether we like to admit it or not, any feasible plan will be a big business and therefore must be based on a good administrative practice.

(7) Federal assistance in a large program such as is being contemplated and which a large majority of the citizens is demanding, must be expected to equalize the overall financial burden. This will be necessary in order to assist those communities less fortunate than others. The experience with federal assistance to date in public health programs sponsored by the United States Public Health Service is to be commended. The assistance which has been given has had no strings attached to it. No State or Local Health Officer would tolerate federal assistance which would interfere with local planning.

(8) The most skeptical physician will agree that the medical profession is continually interested in research. This must never be discouraged. What better proof do we have of federal assistance in this respect than to review the activities of the United States Public Health Service from the time of Dr. Gorgas? We as physicians and as Public Health Officers must accept this fact and cooperate.

Some four or five years ago a National Physicians Committee was created. What is more essential is that all local and State societies affiliated with our official National Organizations strive to accomplish our objectives. A carefully selected membership for a National Research Committee will do much to maintain our professional integrity.

(9) Some ten years ago a County Medical Care Program was begun in Canada immediately across the Detroit River. Would it not be advantageous to analyze both its failure and success? In the State of Washington a state-wide program is being conducted and has been for the last three years. Should not the experience gained there be analyzed critically? In other words, let us forego a defensive attitude and resolve to undertake an offensive point of view immediately.

As physicians, our interest is sympathetic to all persons in need of medical care. They must be assisted and cared for. Further, we must be conscious of our privileges and respect the confidence placed in our judgment by mankind.

Health officers are concerned with providing a wholesome environment and the maintenance of high standards of public health; to undertake to pass and enforce public ordinances that will provide the greatest health benefits to the majority; to so direct our staffs as to permit a lengthening of the life span and to assist in a program whereby each individual will live a complete and normal health life.

We cannot live in the past, we must face the future. We must give leadership to an ever changing world. Let us strive to make our world a better place in which to live, based on justice, but not at the expense of eliminating initiative.

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NARCOSYNTHESIS AND HYPNOTISM*

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Your Commanding Officer has requested this lecture today on narcosynthesis and hypnotism. I shall take the liberty of making the first named the central theme of discussion, because so much interest has been stimulated in this type of therapy in World War II. It has also interested me more than hypnotism.

"Narcosynthesis" is a term coined by Grinker and Spiegel of the Medical Department, U. S. Army Air Forces, to describe a method of synthesizing or reintegrating the personality factors in patients suffering from the neuroses of war. In a practical way it utilizes the effects of small doses of intravenous sodium pentothal or sodium amytal to assist in psychotherapy.

In order that you may more clearly understand this procedure I would like to give you a simple explanation of the psychological mechanisms used by the normal as well as the abnormal individual and then briefly outline the history of the development of narcosis or sleep treatment for the mentally ill.

Let us first discuss some of the basic concepts concerning the functioning of the so-called normal mind, as well as the abnormal. My approach will be as simple as possible, and I hope you will pardon any over-simplification. One of my students recently said to me following my lecture on the development of mental illness: "Doctor, I have always understood that psychiatry was a very difficult and involved subject, but it all seems very simple to me." It would appear that I certainly made the problem appear too simple on that particular day.

Mental diseases are usually classified into two types—organic mental illness and functional mental illness. This is probably not the best division, but it will suffice for our purpose today.

Organic mental illness is due to active demonstrable pathology in the central nervous system, such as we find in dementia paralytica, psychosis due to brain tumor, psychosis with cerebral arteriosclerosis or traumatic psychosis. The general practitioner has no particular difficulty with this concept, because it is his usual concept of the development of all or most physical diseases and he is not surprised that there should be interference with mental function if there is interference in brain function, and he clearly understands why the mental illness is treated by treating its basic etiology. As this concept of organic mental illness is easy to understand we will pass on to the second and more difficult group of mental illnesses.

Functional mental illness is that type of disorder of the mind developing without any known organic etiology, and we might just as well have named this group "psychosis without organic disease"—psychosis, of course, meaning mental illness. The physician not trained in psychiatry usually has great difficulty in understanding how these mental illnesses develop, for mental illness without organic disease seems to him somewhat fantastic, mystical and difficult to comprehend, and the psychological approach seems very involved, as it does not follow his usual concept of physical illness. Let us, therefore, discuss now some of these psychological factors involved in the development of functional illness of the mind.

The concept of "mind" is often vague, indefinite and ill-defined. There are many definitions. In thinking of "mind" we think of "brain", but certainly these two are not synonymous, for the brain has physical qualities, so that we can see it, feel it, weigh it, cut it and study it through various other physical means. We cannot do this with the mind, so that mind is more than brain, more even than the total of all our body organs, and its definition must include that something which we call life, spirit or soul. Each person, as he develops, gradually becomes aware that he is an individual and is not a part of his environment. He begins to understand that he is a separate entity, that he functions as a unit, even though he is quite dependent on and much influenced by his environment. Such a person, so constructed, is said to have personality. While mind and personality are not identical, we can today use the same definition for each, and say that mind is the individual in action, and, consequently, not static but always changing. In order to study mind, there-

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fore, we must study the individual at the anatomical, physiological, neurological and psychological levels, together with all factors bearing on the life of the individual. These would include hereditary factors, constitutional factors and environmental factors, and a study of the developing individual from infancy to childhood to adulthood. Such a survey would give us what we term the longitudinal status, while a detailed survey of the individual's mental and physical condition at the time of our examination for possible personality defects would give us what we term the cross-section status.

We are all aware that we live in a rather rigid social environment. We soon learn that we cannot have all we wish, that we cannot take from others what we desire, that we cannot act and live as we prefer, and that we cannot satisfy all our instincts and desires as they occur. These may be impossible because the rules of society prevent such consummation. In addition, because of an individual's instruction and teachings he begins to realize that some of these things he so much desires are not considered proper or acceptable by society and he may begin to criticize himself for having such wishes. In this way a conflict situation is set up between his wishes and his conscience. If this situation progresses, more important emotional difficulties may result.

Mental growth is dependent on increasing possibility of adaptation between the individual and his environment and such adaptation is accompanied by stress and strain. The adaptational factors vary in intensity in different individuals and in different situations.

There are two causes for the development of emotional difficulties. The first of these may be said to be due to maladjustment within the personality of the individual and the second due to difficulties arising from environmental factors. We have previously mentioned that a conflict situation may develop within the individual because his desires are not acceptable to his conscience or to society. I would like to outline to you another conflict situation. Each normal person at one time or another has feelings of inferiority. If the individual does not realize that this is normal he begins to be alarmed by such feeling, and unless this fear is overcome at once this individual will become uneasy, tense, retiring and will lack confidence in himself. He will begin to doubt his own capacities and his work and good adaptation will usually suffer. A fertile field for the development of mental illness is thus prepared.

The other source of difficulty is the environment, which can sometimes be quite brutal in its effects. We are all aware of the personal difficulties and terrific emotional upheavals which may arise from such factors as loss of home, loss of finances, loss of father, mother, sister, wife, child, and the loss thereby of part of one's own emotional security. We all know the threat to security from environmental factors, especially seen in time of war, and in many this is not only a threat, but a fact, and these difficulties at times seem insoluble and insurmountable.

At this stage of our consideration it seems to me we should say that whether in peace or in war functional mental illness is determined by the degree of adaptational stress and by the degree of vulnerability of the personality.

I have previously referred to the "normal" person. Who is normal? Does the normal person function expertly and precisely without emotional difficulties? Does he give 100 per cent efficiency in the functioning of his personality? Our answer must be in the negative, as it seems to me that each person who considers himself normal must readily admit of emotional difficulties at one time or another. We must, therefore, refer to the normal as the average, and realize that each normal person has his assets, but also his liabilities, and that no one is mentally perfect. Where is the dividing line between the normal and the milder form of mental illness which we have labeled psychoneurosis?

If the individual, with his good points and weak points, meets a difficult environment, we have seen that certain conflicts, stresses and strains develop. Each of us has had such experiences from time to time in our life adjustment. If we meet the difficult environment squarely, make the necessary adjustments, either in ourselves or in the environment, and proceed with our lives, we have made self-adjustment and we have usually gained in mental growth by such adaptation. If those stresses and strains cannot be allayed through selfadjustment several different types of reaction may ensue. In one instance the individual may develop feelings of inferiority, retire within himself, lose spontaneity and cheerfulness, and gradually develop a feeling of failure, of frustration, of hopelessness and this may suddenly be followed by a suicidal attempt. Where in this course of development did the mental illness begin? In another instance the individual may be

criticized for personal defects or failures in duty or work and gradually develop the need for protection against criticism. This is followed by the placing on others of complete responsibility for his failure. Then comes the conclusion that people are working against him and then he begins to hear criticizing imaginary voices and the plot against him now seems fully developed. Where in this course of events did mental illness begin? In still another instance the over-protected son who has never learned to assume his personal responsibilities in life is taken from his sheltered home into the new and entirely strange surroundings of the recruit training center. Homesickness begets inefficiency, inefficiency begets criticism and criticism begets more homesickness. The situation becomes psychologically unendurable and it is little wonder that this individual suddenly one day develops a stuporous state on the drill field or in his barracks, as a protective device. Where did mental illness begin in this course of events?

In any of these cited instances where the individual has developed mental conflicts several means of attempted solution of these conflict situations should be described and any one or several of these may be used by the same individual at one time or another.

The first way in which an attempt to dissolve the conflict situation may be made by either normal or abnormal is by forcefully putting the conflict out of consciousness, in an attempt to blot out or deny its existence. This may be called active forgetting or repression. These memories may not be fully blotted out, however, but may try to come back into consciousness, and because they are still painful to the individual the process of "active forgetting" is again utilized but the individual at the time may show the results of such continued conflict by feelings of tension or anxiety. These troublesome memories may eventually return to give more difficulty in the form of physical symptoms, such as headaches, tension states, compulsive behavior, somatic complaints and the conditions known as hysterical paralyses, anesthesias, tics, aphonias, and the like. (It is, of course, understood that the patient is not aware of this mechanism.) In other words, the emotional conflicts have become camouflaged and converted into physical symptoms. Such physical symptoms which are engendered by emotional conflict are receiving a great deal of attention in modern medicine under the title of psychosomatic disorders. It has been estimated that from 40 to 60 per cent of all patients coming to hospital dispensaries are suffering from these sorts of complaints, rather than from actual physical disease.

Mental mechanisms other than repression which individuals may use in dealing with conflict situations include regression and projection. In regression the individual's behavior and attitude turn backward in his life process to the attitudes and behavior which we consider normal for infancy or childhood. Such individuals become quite dependent on others; they love the attention of others; they lose their individual drives and ambitions; their behavior becomes more childlike and simple and in the extreme such patients have to be fed and bathed like infants, and in one case of mine the patient actually assumed a fetal attitude for a number of months. Such a reaction is, of course, an obvious protective mechanism utilized in the face of an unbearable emotionable situation.

In the mechanism of projection the individual attempts to protect his own integrity and personal security by placing complete blame for his own shortcomings on people about him. He is never at fault; the responsibility for failure rests on the other fellow. As his situation increases in complexity additional psychological protection becomes necessary, so that the individual then begins to believe that he is subject to the ire and machinations of people about him. This attempt at self-protection may even be carried to the extreme where the individual believes that he is the center of the universe, and even Christ or God.

Other types of mental mechanisms could be described in detail if time permitted. I do want to say a little more about the emotion fear. This is one of the primary or basic emotions and is a protective device to the individual, physiologically preparing him for flight in the face of danger. This is in contra-distinction to the emotion of anger, which, when felt by the individual, prepares him physiologically to destroy the threat to his security. Many individuals are much distressed when they feel fear, and they become afraid of fear, feeling that they must be yellow or a coward to have such emotion. We know that every human being experiences fear, and if we could but learn that we should not be afraid of fear, much emotional distress could be avoided. Many of our boys in combat have developed emotional illnesses largely based on these

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premises and after they learn, through instruction, through experience, or even through narcosynthesis, that they are not cowards because they have experienced fear, their fear of fear or anxiety is immediately dissolved and they may again become stable combat soldiers. The bravest soldier is the one who experiences terrific fear but still goes over the top and performs his assigned duties.

Various anesthetic or hypnotic drugs have been used for many years in the treatment of the mentally ill. Griesinger, in 1882, described the beneficial result of treatment following deep sleep. In 1900 Ragg and McLeod reported on the use of bromides, and Wolff in 1901 reported on trional. Starkey used light ether hypnosis, Newman used intravenous alcohol, Baernstein used scopolamine, Hoff and Kauders used paraldehyde and medinal; and chloroform, morphine and other drugs were also tried.

With the development of the newer barbiturates, nembutal, evipal, sodium amytal and sodium pentothal were found to be quite efficacious in producing sleep. The *British Medical Journal* reports that Dr. Broome, of Oldham, England, was the first physician (date not given) to use the method of intravenous barbiturate injection for psycho-therapeutic purposes. In 1936, J. S. Horsley, of England, used the term "narco-analysis" to describe this procedure, using nembutal, amytal and pentothal as these drugs were developed. Horsley used small doses of these drugs intravenously to produce a state of relaxation with heightened suggestibility, and in this state the patient could discuss more freely his mental conflicts. Muteness, waxy flexibility and acute depression seemed to disappear temporarily under the influence of the drugs. These barbiturates were principally indicated because of their selective action on the brain stem, their non-toxic qualities, and the ease of production of a narcotic state in which the drug apparently acted in an anti-inhibitory way, as a result of apparent depression of the inhibitors.

In America, Bleckwenn, 1930, reported very good results in treating mental illness with sodium amytal. Palmer and Braceland, from 1930 to 1936, set up a standard technique of prolonged narcosis with sodium amytal at the Pennsylvania Hospital. Broder reported an abridged method with sodium amytal, Thorner reported results, especially in catatonia, and more recently Wilde and Sargant, of England, report success with temporary narcosis in the treatment of the war neuroses.

Two types of treatment with intravenous barbiturates gradually evolved. The first of these—prolonged narcosis—consisted in keeping the patient asleep for 15 or 20 hours daily for a varying period of from 5 to 20 days. During the waking periods—twice daily—the patient was found to be more quiet and relaxed and was in better contact with reality, so that his emotional problems could be discussed with him more successfully.

The second type of treatment, temporary narcosis, consisted in giving the patient small doses of intravenous barbiturates, not sufficient to produce sleep but causing the patient to be more suggestible, to lose his inhibitions, and in this state he was able to talk clearly about his emotional conflicts and memories, which in the waking state were possibly repressed from consciousness.

In 1933 we began to utilize both methods of therapy at St. Elizabeths Hospital, but temporary narcosis was used much more frequently for the reasons that it was easier, simpler, required less time and personnel, complications were entirely absent, and we also had a greater number of patients in which this type of therapy seemed indicated.

During the Tunisian campaign from January to May, 1943, Grinker and Spiegel used various types of treatment for the war neuroses encountered in North Africa in both British and American troops. One type of treatment was the intravenous injection of sodium pentothal to induce a semi-narcosed state, during which the patient is able to live through his traumatic battle experience, thereby releasing intense repressed emotions and permitting the personality to become more stable and better integrated under the guiding hand of the psychotherapist. This technique the authors called narcosynthesis. With some possible variations it seems to have been essentially the same technique as Horsley's narco-analysis and the psychotherapeutic interviews with intravenous barbiturates of many other workers in this field. No credit should be withheld from Grinker and Spiegel because of this, as they appear to have been among the first Americans to use the treatment in the forward military areas where it seems so especially indicated. These authors feel that this treatment "is immediately indicated in all cases of the severe anxiety states associated with mutism, stupor, regressive somatic manifestations, regressive (psycho-

sis-like) psychological manifestations, and amnesia." They also feel that sodium pentothal is to be preferred over sodium amytal, due to its shorter period of effect and the absence of drowsiness or sleep which usually continues after interview with sodium amytal. For this reason the patient can carry over from the narcotic state to the normal waking state with no interference in the stream of consciousness which, if allowed, might permit more easily of re-repression of the troublesome emotions with resultant loss of the re-integrative effort already made. Grinker and Spiegel report dramatic improvement, so that "the stuporous become alert, the mute can talk, the deaf can hear, the (hysterical) paralyzed can move, and the terror-stricken psychotics become well-organized individuals."

As St. Elizabeths Hospital has always been used for the treatment of military cases we admit a large number of young men from the ages of 17 to 25 with acute mental breakdowns. Many of these men have been unable to adjust in military life and have developed marked guilt reactions based on failure or fear of failure, tension, anxiety and derogatory hallucinations. These reactions often develop into stupor states of varying degree. We found that in such stupors, usually diagnosed as catatonia, small doses of intravenous sodium amytal would permit the patient to begin talking with the physician in quite a rational manner. Conflicts, worries, anxieties, doubts, loves, hates, feelings of frustration and guilt and many other emotions were readily discussed. The facts of the patient's illness could be clearly explained to him, his fears allayed, his suspicions dissolved and through development of the patient's confidence in the physician much of the basic ground work of rebuilding or re-integrating the patient's shattered personality into an efficient working unit could be accomplished. These therapeutic interviews were given as often as indicated—usually never more than one a day. Sometimes one treatment was sufficient to prevent further stupor with accompanying muteness, sometimes several were required; and occasionally we met with total failure with either one or several treatments.

The technique of this procedure is relatively simple: The patient is placed in bed in a single room, away from any noise or commotion. A 7½ grain sodium amytal ampoule is prepared in a total amount of 10 cc. for intravenous use and injected into the antecubital vein at the rate of about 1 cc. per minute. In the mute, stuporous patient we watch for such signs as flushing of the face, opening of the eyes, moistening of the lips, or body tension. The dosage to this point varies from about two grains to 7½ grains, and in rare cases will not be reached until 15 grains have been given. On noticing these signs the injection is stopped momentarily and attempts are made to rouse the patient by speaking to him, moving his hands or directing him to answer questions. Often the patient will act as if he is awakening from a sleep and without difficulty will proceed to answer direct questions and then will readily discuss his emotional difficulties. If this reaction should not occur the injection of the drug is continued slowly and the procedure of stimulation to talk is repeated. If the patient begins to get more stuporous the treatment has been a failure and no further injection of drug is indicated until another occasion. After successful therapeutic interview of from 20 to 60 minutes the patient will become drowsy and unless further aroused will sleep for about an hour. No complications have been encountered in this procedure and these "stimulations" may be given on successive days if indicated.

The use of this treatment technique has not been limited to cases of stupor, but has been used successfully in cases of hysterical paralysis, tremors and amnesia and in anxiety states. In these conditions the patient is given enough of the drug to produce relaxation and obvious drowsiness. The eyes often remain closed during the entire interview except for the period of most acute anxiety expression. No patients in our series have become disturbed, uncooperative or unmanageable during the treatment.

Since the beginning of World War II we have also used the technique in treating various types of the neuroses of war, with very beneficial results.

I would like to tell you briefly of several rather typical illustrative cases in which intravenous sodium amytal proved beneficial.

A 19-year-old Marine Corps private with two years' service was admitted to St. Elizabeths Hospital in December, 1943. He had developed acute anxiety while on Guadalcanal from November, 1942, to February, 1943, but succeeded in preventing his condition being known to anyone until after his admission to the hospital for recurrent malaria in October, 1943. On admission to St. Elizabeths Hospital he was tense, anxious and depressed, quite tremulous, and showed definite startle reaction. No

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gross signs of psychosis were in evidence and he was cooperative, well oriented and showed no mental confusion. Fingernails were bitten and hands were moist and cold. His history revealed earlier truancy, together with a very bad home situation. The patient continued to have battle dreams and stated that he had an amnesia for a period on Guadalcanal of about nine days' duration immediately following strafing and bombing by enemy planes. He was fearful that he had been yellow or a coward, as he remembered running into the jungle. He was given temporary narcosis with sodium amytal and almost immediately began relating his experiences in getting into his foxhole during the bombing raid and then told of his running into the jungle, of his fear and apprehension, of how he found food to sustain himself and of his actions during the next few days until he rejoined his outfit. In this therapeutic interview it was repeatedly suggested to him that everyone experiences fear, that he should not be afraid of fear, and that he would recover his memory and become more stable emotionally after the treatment. On the following day the patient had forgotten some of the details of his previous amnesic period but was definitely more relaxed, less fearful and expressed his belief that he would recover. He received no other amytal injections and on April 5, 1944, he was discharged from the hospital, still showing symptoms of insecurity and lack of confidence in himself, but it was felt that he could return home and make a satisfactory adjustment there. This case was classified as a mixed psychoneurosis and illustrates the effect of environmental factors on a vulnerable personality.

A 21-year-old Marine with six days' service was admitted to St. Elizabeths Hospital in September, 1940, following an acute onset with agitation, excitement, incoherent talk and auditory hallucinations, followed by the development of stupor. On admission he talked very little, was obviously depressed, tense, apprehensive, was disoriented and thought that he should be killed. His talk was so fragmentary that he could give little detailed information about his past history or present condition. His condition varied from one of restless confusion to obvious stupor. He was given intravenous sodium amytal for a therapeutic interview with the psychiatrist and the patient's mother was present. He quickly became alert, his confusion disappeared and he began to sob and cry. He stated that he felt that he was under criminal charges, thought he was to be killed or that his body would be placed on a block and he would be beaten with mallets until his body was a mass of human pulp, but he would live and suffer through this ordeal in penalty for his failure in the Marine Corps. After he was allowed to express his feelings completely he was then told of the real facts of his illness, where he was, how he got to the hospital, and that he was having a mental illness, from which he would recover. He also had a very satisfactory talk with his mother. This patient relapsed into his stuporous state on the following day, but soon showed gradual definite improvement and made a full recovery. His case was classified as dementia precox (schizophrenia), catatonic type.

A 42-year-old retired Signalman, United States Navy, was admitted to St. Elizabeths Hospital in March, 1944, with a history that he had had systemic syphilis many years ago and recently became much worried, had many somatic complaints, and felt that his condition was due to syphilis of the spine. A few weeks prior to admission he had developed gross jerking of the head, neck and upper trunk in rhythmical fashion. Attention directed to his body markedly increased these jerking movements. No evidence of psychosis could be found, nor could any physical cause for these muscular movements be found. When given intravenous sodium amytal for temporary narcosis he became quickly relaxed and all the muscular jerkings ceased. While under the influence of amytal his personal difficulties were discussed at length and he revealed that he had recently been living with a woman as man and wife and that he had gradually become impotent. This had made him worried and anxious and in searching for the cause he began to believe that the cause was syphilis of the spine. He was told definitely that he had no syphilis of the spine, that his body movements were on an emotional basis and that he very definitely would recover from this condition. Following this treatment he showed some slight return of the muscular movements and two additional treatments were necessary before they completely disappeared. His case was classified as psychoneurosis with obsessional and hysterical features.

Hypnotism is a special psychiatric treatment procedure and should be grouped with shock therapy,

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narco-analysis, narcosynthesis, psychoanalysis or other exploratory psychotherapy.

The fact that individuals may be placed in a very suggestible state—the hypnotic trance—has been known for many years. Only in recent years has this procedure been further investigated and utilized as a psychotherapeutic tool in cases of mental illness and more particularly in that group known as the psychoneuroses. There has been a hesitancy on the part of many to use the treatment, because hypnotism was held in ill-repute for many years, due to its use by charlatans and quacks. In the hands of experienced workers psychotherapy with hypnotism seems to have given very favorable results in well-selected cases, and more and more interest is being centered on it, as well-known workers in the field report its successful use. The success of this procedure is based solely on the fact that it is a means for psychotherapy.

SUMMARY

An attempt has been made to give you certain simple basic concepts concerning the development of functional mental disorders. Some of the mental mechanisms or mental gymnastics have been briefly discussed and illustrative cases, principally utilizing these mechanisms in the developing mental illness, have been presented. The history of the development of the sleep treatment or narcosis therapy has been briefly given, with special attention directed to psycho-therapy in association with the use of small doses of intravenous barbiturates, called narcosynthesis by Grinker and Spiegel. Reference has been made to similar procedures developed by other workers in the field. Specific technique has been described and clinical illustrative cases presented briefly. Remarks have been made concerning the use of hypnotism as a special treatment procedure.

In conclusion, we may say that temporary narcosis with sodium amytal or sodium pentothal can be a very valuable therapeutic tool when used with psychotherapy, but that it is not a cure when used by itself as medication. We must never forget that we should always treat the patient and not the disease.

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RADIATION AND NEUROSURGERY IN ADVANCED CANCER*

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In the relief of recurrent and metastatic cancer, cooperation between the general practitioner and a number of specialists is usually necessary, and in many instances much can be accomplished. For best results, real team work is necessary. In the first place, it is up to the general practitioner to organize the team by calling in the specialists. And, in the second place, it is up to each specialist, not just to do his share, but to keep himself informed in a general way of the activities of other specialists so that he will know when additional help can be obtained and where to obtain it. Almost always, the services of the home physician, a surgeon, a pathologist, and a radiologist are necessary. Frequently an orthopedist and a neurosurgeon are needed too.

Once it has become apparent that cancer cannot be cured, there is an unfortunate tendency to lose interest, to overlook or neglect measures which may prolong active life and prevent suffering. Not all the members of the medical profession appreciate fully what can be done in the radiation of late cancer. Not long ago, during a campaign to raise funds for cancer control in another state, a doctor remarked that so far as he was concerned, when a patient of his developed recurrent or metastatic cancer, the only honest advice he could give him was to jump in the nearest lake. Such an attitude is, to say the least, unduly pessimistic. Many cancers that cannot be cured can be successfully controlled for very worth-while periods of time. And even when the progress of the disease cannot be checked, it is often possible to alleviate pain by other means than narcotics. Since radiation is the most useful single agent in the treatment of advanced cancer, almost every patient should receive roentgenological consultation. No patient, no matter how desperate the situation appears, should be abandoned to narcosis without careful evaluation by a surgeon, roentgenologist and pathologist. We still do not know enough about cancer to predict with certainty which tumors can be controlled. Percentage figures do not apply to the individual. Whether the cancer can be controlled or not, if only relief of pain can be obtained, radiation is well worth while. Relief is more complete and lasting than that provided by narcotics, and the undesirable side effects of radiation are usually temporary, whereas narcotics quickly lead to addiction, poor nutrition, and personality changes. If there is any hope of amelioration, radiation should be employed. Many times good and sometimes startling results follow.

To cite illustrative case histories:

Case I. A 65-year-old man had lymphosarcoma of the left antrum and orbit with prominence of the eye and impairment of vision. The tumor receded promptly under radiation with correction of the proptosis and restoration of vision. Four months later, after a severe gastric hemorrage, x-ray examination revealed polypoid tumors in the stomach. On a presumptive diagnosis of lymphosarcoma, the stomach was radiated, and, in four weeks, check examination showed complete regression of the tumor. A year later recurrences appeared in both the face and stomach and the patient died of gastric hemorrhage.

Comment: In this instance control of the tumor was rather brief. But though only sixteen months of active life was given this patient, proptosis of the left eye was corrected, and its vision saved. More important, the pain and horror of destruction of the face was prevented.

Case II. Over four years ago, a 14-year-old girl presented herself for treatment of an endothelial myeloma of the left acromium. The shoulder was very painful, and there were multiple pulmonary metastases. Radiation of shoulder and chest was followed by rapid relief of pain and complete regression of the primary tumor and the pulmonary metastases. Radiation of recurrences and new metastases was necessary only three times in the next four years, but now the tumor is rapidly getting out of control.

Comment: During the four years in which this patient responded to radiation, she suffered for only brief periods and led a more normal unrestricted life

*Read before the annual meeting of the Medical Society of Virginia, at Richmond, October 23-25, 1944.

than do most persons in her age period who have diabetes or rheumatic heart disease. The latter are certainly preferable to endothelial myeloma, but if this patient had not received radiation, she would not have experienced four years of happy active life.

Case III. This is the most remarkable case history in our records. Over twelve years ago, a 6-year-old girl was seen because of rapid weight loss and a tumor of the right anterior chest wall of three months' duration. X-rays showed a sarcoma in the right seventh rib, and the lungs riddled with metastases. A biopsy, later reviewed by Dr. Ewing, was reported "atypical Ewing's tumor".

Pulmonary involvement was so massive that she was considered beyond help and sent home without treatment. Ten weeks later, she returned, cachetic, cyanotic, literally in extremis. Hating to dismiss the frantic parents without doing anything, we gave the entire thorax 600 r units on two successive days and sent the child home to die. To our utter astonishment, she walked into the hospital five weeks later, a vigorous, healthy girl with no evidence of tumor anywhere. Two more x-ray treatments of 600 r were then given.

This patient, over twelve years later, is today a perfectly normal young woman and happily married. There has never been a recurrence.

Comment: Here, the effect of radiation was really miraculous. We do not present the case with the suggestion that this result can be repeated, but only as proof that no one can anticipate the response of a radio-sensitive tumor to x-ray.

* * *

Pathological fracture is a frequent and often unavoidable complication of bone metastases. The possibility of this complication must be kept constantly in mind by all physicians concerned with the case, though it is primarily the roentgenologist's responsibility carefully to study bone metastases and to call for orthopedic consultation whenever danger arises. Caution in the use and handling of weakened parts and the application of supporting braces can do much to prevent fractures of the extremities and crushing deformities of the spine. Radiation often causes actual regeneration of destroyed bone. Pathological fractures are usually extremely painful and greatly increase the always difficult nursing problem in late cancer. Frequent check-up examinations and prompt action could reduce the incidence of pathological fracture.

Case IV. For example, a 32-year-old woman had a radical mastectomy, post-operative radiation, and surgical sterilization because of a carcinoma of the right breast with axillary metastases. In spite of all this, fifteen months later, right hip pain developed, and x-rays revealed destructive metastases in the right acetabulum. Danger of pathological fracture was great. Radiation was started immediately. She was put to bed and both patient and nurses were warned to use care in the handling of the right leg. Pain relief was provided in a very few days. Gradual bone regeneration followed and she was allowed to resume her activities as the bone strengthened. Three months after radiation, the large defect was completely filled in. Since that time, the patient has received additional radiation for several rib metastases.

Comment: The outlook here is bad, but, so far, pain relief has been good, and the patient is still leading an active life, a year and eight months after axillary metastases were found. The important point is that she was not allowed to become incapacitated by a pathological fracture of the pelvis.

* * *

Persistent pain in a patient with a known malignant neoplasm should be regarded as evidence of metastasis, whether or not the diagnosis can be confirmed by roentgenographic evidence. Pain due to metastases frequently precedes demonstrable changes. X-radiation at this point alleviates suffering and prevents deformity due to bone destruction. Waiting to radiate until destruction has taken place simply prolongs the period of suffering for the patient and increases the chances of deformity and pathological fracture.

Case V. A 40-year-old woman had a radical mastectomy, post-operative radiation, and radiation sterilization for a carcinoma of the left breast with axillary metastases. Three and a half years of normal existence followed. Then severe constant pain appeared in the left elbow. X-rays showed slight decalcification in the lower end of the humerus. Radiation was given at once without waiting for definite bone destruction, on a presumptive diagnosis of metastasis. Relief was prompt and permanent, and was followed by another two and a half years of health. At the end of this time, six years after mastectomy, the lungs abruptly developed innumerable metastases and death occurred in a few weeks.

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We had never had occasion to regret radiation for pain in a patient with known cancer before bone destruction could be demonstrated. There is no excuse for delay, as the dosage required produces no harmful effects. On the other hand, we have had occasion to regret not radiating painful areas promptly in such cases.

Case VI. For example, another lady who had a carcinoma of the breast with axillary metastases also received a radical mastectomy, post-operative radiation, and x-ray sterilization. This treatment was followed by three and a half years of good health. She then developed low lumbar pain, but x-ray examination was negative for metastases. Her physician then decided she must have arthritis, and a hunt for foci of infection was started. This was nine years ago, and we did not insist upon radiation, as we now would. Within three weeks the pain had become rapidly worse, and we then did insist upon radiation, though x-ray examination was still negative. Relief was prompt and complete. Two months later, the patient was back with pain in the upper lumbar and cervical region. On this occasion, bone metastases were found in several vertebrae but the lumbar spine was still negative.

Comment: There can be little doubt but that the lower lumbar pain had been due to metastases, the progress of which was aborted by radiation before bone destruction appeared. The patient could have been saved three weeks of excruciating pain. This would have meant a great deal to her, particularly in view of the fact that she had, as it turned out, less than a year to live.

* * *

It is not within the scope of this paper to go into the effects of the secretions of the sex glands on cancer. But we should like to point out that in the general enthusiasm over the success of surgical castration in some cases of carcinoma of the prostate, there has been a tendency to forget that radiation often provides relief of pain from bone metastases due to carcinoma of the prostate too. Both castration and radiation are palliative, not curative, measures. When pain persists or returns after castration, radiation should be tried.

Case VII. As an example, we present the history of a 55-year-old gentleman who was found to have a carcinoma of the prostate with pelvic metastases. Bilateral orchidectomy was followed by freedom from pain and good health for a year. Pain in the right hip then recurred. A course of stilbesterol provided five months of perfect comfort. When pain again began, x-ray therapy produced relief for four months. Next stilbesterol was used effectively for six months. At this point, radiation provided complete relief for two more months. Then metastases appeared in the lower dorsal spine, accompanied by back and girdle pain, the latter probably from nerve root pressure due to slight compression of the diseased vertebrae. Radiation and an orthopedic brace kept this patient active for two more months. Multiple metastases then appeared, and death took place in a few weeks, two and a half years after orchidectomy.

Comment: This patient, a prominent lawyer, carried on an unusually large and strenuous practice for two years after painful bone metastases had developed. He was an invalid for the last six months, but except for the terminal two or three weeks, severe pain had to be endured for only a few days at a time, due to the combined efforts of his internist, urologist, orthopedist, and radiologist.

While on the subject of castration, it might not be out of place to point out that the success of this measure in carcinoma of the prostate offers indirect support to those who advocate castration for carcinoma of the breast. We have done so for many years, and are fortunate enough to have one remarkable case history which is difficult to disregard.

Case VIII. A 30-year-old housewife noticed a hard lump above the left clavicle which her physician removed for pathological diagnosis. The report was "highly malignant carcinoma metastatic to a lymph node", and she was referred for treatment one week later. Beneath the supra-clavicular scar, there was already an area of stony hard infiltration ten by three cm. in size; there was a movable hard mass five cm. in diameter over the outer edge of the left pectoral muscle; there was a three and a half cm. mass in the left breast substance below the nipple, and a two and a half cm. in the left axilla. Following radiation sterilization, she was sent home for a few days' rest before undertaking a course of radiation to the local areas. She was unable to return until eight weeks later. With the exception of the axillary mass, all the tumors had completely disappeared. Further radiation was therefore withheld. This amazing regression persisted for one year. Then and two years later, recurrences in the breast area were radiated. Today, over six years

since she was sterilized, this patient has no evidence of cancer anywhere and is in perfect health.

Comment: Admittedly, the effect of castration cannot be predicted in the individual case, and castration is perhaps a radical measure to force on a young woman who desires children. Certainly women who have had their families or who are near the menopause have everything to gain and little to lose by taking this step. Whether radiation or surgical castration is preferable, and if the latter, whether castration should be done after the menopause as well as before, are questions on which we have nothing to contribute.

* * *

In the fight against pain due to advanced cancer, the contribution that the neurosurgeon can make is extremely valuable, a fact which is sometimes overlooked. The relief afforded by alcohol injections of nerves, section of sensory roots, and chordotomies is dramatic. Chordotomy seems to be displacing root sections except of the cranial nerves, and section of the spinothalamic tract in the mesencephalon is being successfully performed to produce hemi-analgesia. But what procedure should be undertaken is a concern of the neurosurgeon. The important thing is for those handling cancer to keep the neurosurgeon in mind, and to get his advice as soon as it becomes apparent that other surgery and radiation are not going to be effective. Besides a large number of nerve injections, our Department of Neurosurgery has performed 43 chordotomies for relief of pain in the past three years. There were 35 patients, some having more than one chordotomy. There were two deaths, giving a 6 per cent operative mortality. In general, it can be said that upper thoracic chordotomy is a very dependable procedure. Failure to relieve pain is usually due to incomplete section of the spinothalamic tract, but it is easy to go back and do a deeper section. Relief of trigeminal pain is usually very successful. Relief of upper thoracic pain and pain in the upper extremities is not as uniform, but some excellent results have been achieved.

When considering the advisability of neurosurgery, the possibility of undesirable results must be weighed. Loss of sensation, loss of sphincter control, and other paralyses must be risked. As a practical rule, the pain should be more difficult to live with than the possible complications. Obviously a patient who has only a few more weeks to live should not be subjected to surgery of a fairly radical nature, nor should a poor operative risk whose pain can be controlled by small doses of opiate undergo the hazard of surgery. Often the decision is a difficult one but it would seem preferable in doubtful cases to proceed with operation for there is so much to be gained and comparatively little to be lost.

To illustrate the usefulness of neurosurgery, two cases are cited:

Case IX. A 25-year-old woman was admitted for treatment of a left facial tumor of eight years' duration. During this time, the tumor, a chondromyxosarcoma, had been removed three times by different surgeons, and each time recurrence was prompt.

A radical resection was done, the left hard palate, floor of the left orbit, the left maxillary sinus and zygomatic arch all being sacrificed. The result was no better. Three months later she had a definite recurrence, and for the first time, was suffering severe pain in what remained of the left side of the face.

She was in excellent condition, and from the previous history, there was every reason to believe that she had years of life before her. The sensory roots of the left fifth cranial nerve were therefore divided, with immediate relief from pain. This was three months ago, and so far, in spite of persistent tumor, she has had no further discomfort.

Case X. A 58-year-old man, complaining of gastric distress, was found, on x-ray examination, to have a prepyloric carcinoma, for which a subtotal gastrectomy was done. Every effort was made to remove the regional lymph glands, to several of which the tumor had metastasized. The immediate result was excellent and the patient remained well for two years and three months. Then after an automobile accident, a pathological fracture of the 8th dorsal vertebrae was found. While the patient was in a body cast and receiving x-ray therapy to his back, first an epigastric tumor, then jaundice appeared. The abdomen was reopened, and recurrent tumor found obstructing the common bile duct. A choledocho-duodenostomy was successfully performed. Though the jaundice was relieved, in a few weeks intractable abdominal pain developed. Between periods of opiate-induced stupor, suffering was constant and severe. Yet it was obvious that the end was not yet at hand. At the level of the 2nd and 3rd dorsal vertebrae, both antero-lateral aspects of the cord were cut to a depth of four mm., produc-

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ing analgesia to the upper abdominal level. The patient lived two more months. From a portion of a letter written by a member of his family soon after his death, you may judge whether the procedure was worth while:

"The results of the operation could not have been better. He had almost complete relief from pain and was mentally clear and physically comfortable right up to the end. He had no motor paralysis or loss of sphincter control at any time and was able to walk to his bath the day before he died."

CONCLUSIONS

1. A case of late cancer can seldom be handled to best advantage without close cooperation of a number of physicians.

2. The development of recurrent or metastatic cancer does not necessarily mean the end to useful happy life. An occasional cancer can be arrested indefinitely, some can be controlled for years or months, and many patients can be relieved of pain by radiation.

3. Destructive bone metastases call for caution in the use of the diseased part and, whenever necessary, orthopedic support in an effort to prevent pathological fracture. Radiation produces bone regeneration in many such metastases.

4. Persistent pain, even though metastases cannot be demonstrated roentgenologically, is an indication for radiation in patients with known cancer.

5. Radiation is still a valuable supplement to orchidectomy in metastatic carcinoma of the prostate.

6. The ability of the neurosurgeon to relieve pain in many cases of late cancer should be kept constantly in mind.

DISCUSSION

DR. JOHN M. MEREDITH, Richmond: It is always profitable to hear anything Dr. Cooper and Dr. Archer have to say, and I am sure we have all enjoyed their paper. Dr. Cooper has presented this morning cases that are very interesting. I remember the case of the twelve-year-old girl he cited in Charlottesville, which proved beyond a doubt the benefit to be obtained from irradiation.

It need not be emphasized that all patients with malignancy and metastatic lesions frequently require irradiation and other measures for the relief of pain.

Dr. Archer and Dr. Cooper were kind enough to send me a copy of their paper several days ago, and, in reading it over, it occurred to me that perhaps the most helpful contribution I could make would be to stress certain points about the surgical relief of these patients and to emphasize that there are limitations in this as in everything else.

Patients with metastatic malignancy, though hopeless in so far as cure of the disease is concerned, should not be denied operative procedures for mitigation of the intense suffering so common where malignancy involves the cranial or spinal nerves.

Often the presence of bone metastasis in carcinoma of the prostate, ovaries, breast and other organs can be almost certainly proved inferentially by the finding of an elevated serum phosphatose and an accelerated blood-sedimentation rate, even in the absence of demonstrable radiologic evidence of metastatic disease. We have seen a number of such cases later proved by post-mortem examination or by subsequent x-ray films.

The intractable pain of metastatic malignancy arouses the sympathy of all physicians. Addiction to morphine is to be expected in such patients unless the pain can be relieved by other measures. We believe, and this point was stressed by Dr. Coleman last year in his Oration on Surgery at the annual meeting of the West Virginia State Medical Society, that, with rare exceptions, patients with metastatic disease should be informed of the nature and outlook of their disability before any major neurosurgical procedure is carried out. Unfortunately, too many such patients are not told that they have a malignant disease before chordotomy so that when pain is relieved by section of the spinothalamic tracts of the cord (chordotomy) and the carcinoma or sarcoma steadily progresses, involving, as it frequently does, motor nerves or long fiber tracts in the cord with subsequent paralysis, the patient, if unaware of the serious nature of his condition, may feel grateful for the relief of suffering but becomes discouraged and embittered because of increasing helplessness. Unless the patient knows he has a malignant condition, no matter how carefully it is explained to him that the operation to relieve pain will in no way affect his disease, the relief of pain in itself, however complete, may be far from satisfactory to the patient.

A word of caution might be said also about operating on patients who are addicted to morphine, especially when chordotomy is considered. Morphine sulphate gives only partial relief of nerve pain resulting from malignancy but the measure of relief it affords and its quieting effect on the nervous system easily and rapidly lead to fixed addiction to the drug. We have found such cases unsatisfactory for major operations for relief of pain from malignant disease as it is difficult if not impossible to determine afterward how much of the patient's complaint is due to actual pain and how much is the residuum of morphine addiction and craving for the drug. It often appears that the patient's discriminatory powers are seriously jeopardized by the morphine and he may complain bitterly of pain post-operatively in areas entirely numb to pin-prick stimulation. On careful analysis, it is often evident that his discomfort is due to the withholding of his morphine post-operatively rather than to the nerve pain which he experienced before operation. It is undoubtedly true that certain patients experience pain

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in the legs and pelvis after successful upper thoracic chordotomy due to transmission of pain impulses along the sympathetic nerve fibers accompanying the great pelvic vessels. Such impulses apparently may still be transmitted and registered in the thalamus or other higher cerebral centers in spite of a successful bi-lateral chordotomy producing a clear-cut sensory level up to the lower rib margin or nipple line. However, so far as prolonged use of morphine before chordotomy is concerned, we now believe that neuro-surgical operations (especially chordotomy) performed for the relief of pain in incurable malignancy are contraindicated in patients who have become dependent on opium. This view is also shared by Adson of the Mayo Clinic and other neuro-surgeons throughout the United States.

The preceding remarks are not to be interpreted as a condemnation of chordotomy, so brilliantly conceived in 1912 by Spiller of Philadelphia, who contributed so much to American neurology, and first carried out by Edward Martin of the University of Pennsylvania, and later perfected by Frazier. We wish only to emphasize its limitations and to urge careful selection of patients, with especial reference to life expectancy and consideration of morphine addiction, before operation is undertaken with any real hope of relieving the patient of his suffering with satisfaction to all concerned. Dr. Crutchfield's series of chordotomies at the University of Virginia Hospital, as reported by the essayists, certainly deserves the highest commendation.

Mesencephalic section of the spinothalamic tract, as carried out by Walker of Chicago, is utilized for the relief of pain in the arm and upper chest. Rhizotomies are still done in selected cases for local chest and arm pain especially, and subarachnoid alcoholic injection may be used in debilitated bed-ridden patients.

Facial and neck pain of malignant origin is another and more difficult problem so far as its surgical relief is concerned. If the tumor does not involve the lateral aspects of the face and scalp, the usual operation, as for the relief of tic douloureux, may be done, as originally devised by Spiller and carried out by Frazier (fifth nerve post. root section) in 1901, provided the pain is confined to the fifth nerve distribution alone. If it involves the throat, the side of the neck, the ear and other adjacent areas, more radical nerve sections must be done, possibly the fifth, ninth, one or two filaments of the tenth, and the upper posterior cervical roots on the same side. In relatively young and otherwise vigorous individuals, such procedures are often very worth while, relieving the patient of intense suffering for months or years before death ensues due to the inevitable extension of the malignant disease.

DR. COOPER, closing the discussion: I should like to point out that the fact that pain is not always completely relieved after neurosurgical procedures is emphatically not a reason to postpone or omit them. The reduction of an excruciating pain to a moderate pain, or a moderate pain to a light one is well worth while, as anyone who has had the unhappy experience of handling a case of painful cancer will testify.

I do not think there is anything more, really, that remains to be said except to thank Dr. Meredith for his very fine discussion and to re-emphasize that in the handling of recurrent and late malignancy the physician should exhaust all other resources before abandoning his patient to narcosis.

Floral Eponym (25)

IRIS KAEMPFERI, SIEB. RHODODENDRON KAEMPFERI, PLANCH.

KAEMPFER, ENGELBRECHT, 1651-1716.

These two widely different but beautiful flowers, the Japanese Iris and the Japanese azalea, were named for the first plant explorer to Japan. Kaempfer was born in Westphalia, studied medicine at Königsberg, and traveled extensively in the East. He was chief surgeon to the Dutch East India Company. At his death his unpublished mss. were purchased by Sir Hans Sloane. Among them was a history of Japan which was translated by J. G. Schenchzer and published in London in 1727. For more than one hundred years it remained the chief source of information on Japan for the general reader.

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THE RELATIONSHIP OF SOIL FERTILITY AND PSYCHIC REACTIONS

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Man's optimal growth, development, and functions require optimal nutrition. The source of nutrition for zoological life is the product of the soil and the sea. The quality of the soil's product is dependent on its fertility. Thus, soil, as a source of man's food, becomes a concern of the physician. I quote the United States Department of Agriculture's 1938 Year Book for a description of fertility of the soil: "The quality that enables a soil to provide the proper compounds, in the proper amounts and in the proper balance for the growth of specified plants, when other factors, such as light, temperature, and the physical condition of the soil, are favorable." Soil fertility, as described by Howard,[1] "is the condition which results from the operation of nature's round, from the orderly revolution of the wheel of life; from the adoption and faithful execution of the first principle of agriculture—there must always be a perfect balance between the processes of growth and processes of decay. The consequences of this condition are a living soil, abundant crops of good quality, and livestock which possess the bloom of health."

As doctors we are interested in the biological assay of nutrition. A soil is fertile when the plant or animal there produced sustains man in a state of optimal health.

The Interrelation of Soils and Plant, Animal and Human Nutrition was the title of an address by Auchter,[2] in which he said: "Our knowledge of many aspects of the interrelations between soils, plants, animals and human beings is limited, but some of the work that has been done in recent years gives us fascinating glimpses of the possibility and importance of further discovery. I would go so far as to say that we can now see the outlines of a whole new field of biological, or, shall I say, agricultural, research. From what is already known, this phase of agricultural research should lead to a new orientation of agricultural thinking. Certainly it suggests profound implications for human welfare."

While we are engaged in the most colossal destruction of man and his resources that history records—World War No. II—the question in every pondering mind is "why"? It is the why's of human conduct, both normal and abnormal, both of the individual and of the mass, both in the present and in the past, that have stimulated the scientific investigations of psychiatrists and others. The psychobiology of the group is only the multiplication of the individual's psychobiology—reduced somewhat in its capacity. The psychopathology is tempered in its extremes by the reaction of millions, or increased in its intensity by small mobs. The etiological factors functioning in the individual are a controlling factor in group behavior.

Psychiatrists have recorded their meditations on mass psychiatric behavior—Hall[3] in his discussion of the manic depressive syndrome of the mass, White,[4] during World War No. I, wrote of psychiatric factors in causes of war, and regarded war as a mass regressive reaction. Stevenson[5] in 1941 suggested "that war be regarded as a mass psychosis caused in large part by emotional disorders and adjustment difficulties somewhat similar to those causing individual psychosis, and as such offered a most important field for psychiatric effort."

A recent psychiatric study of the German problem has been made by Brickner[6] in his book—IS GERMANY INCURABLE? In order to cure we should understand. Brickner's approach to the problem of Germany's millions was that of a modern psychiatrist skillfully getting the complete picture of his patient. The history revealed the onset of illness years before Hitler. The illness manifested its symptoms of lust for power, abnormal reverence of the military, and ideas of persecution. The neuropathology was that of paranoia. Brickner, with his appreciation of the malignancy of paranoia, suggests that an attempt to cure German culture be made by giving the Teutonic mind a more healthy emotional development. "How it should be done is a job for experts in a dozen different fields—anthropology, law, sociology, nutrition, transport, propaganda, psychology, economics, as well as psychiatry—the psychiatrist is expert in only one of those."

This war has presented the physician, and espe-

cially the psychiatrist, with facts about the health of our male population of draft age. The prevalence of neuropsychiatric disorders demands that we think in terms of therapy for the disorders and prevention for the next generation. In the mobilization of our armed forces, neuropsychiatric disorders have been the cause for the rejection of 8 to 10 per cent of the men examined for military service. In spite of this screening at the Induction Stations, 30 per cent of those discharged from the army are discharged for psychiatric reasons.[7]

What are the causes of nervous disorders? Of course, it is not always necessary to know the cause in order to treat, but it is a help. However, the prevention of these disorders is dependent on our understanding of the etiology. There are known factors that make the individual a likely candidate for a neurosis. First of these is his heredity. This we can do little about except to teach him to practice good hygiene. In order that we may impart this knowledge to our patients and to potential patients, we psychiatrists must have a clear concept of what constitutes good hygiene.

We are prone to limit our concept of hygiene to mental hygiene—here I think we confuse the problem. Is there any way to separate mental hygiene from hygiene? Perfection of mental function and maximum capacity cannot be separated from perfection of body function. Thus, I regard our problem of mental hygiene as a part, and an inseparable part, of total human organism hygiene. It is hygienic living that may prevent the precipitation of illness in the less strong and less stable individual. It is good hygienic living, with special attention to defectiveness or other limitations, that may allow certain individuals to function in a manner satisfactory to themselves and to others.

Today psychiatric medicine has a great challenge. A large number of rejected selectees and discharged members of the armed forces have been told they have psychiatric disorders. These men—some of them, who were not conscious of their minor psychobiological disorders—are today looking for medical help. They are coming to psychiatrists for what they previously thought was a stomach, heart, or body ailment. There are not enough psychiatrists to handle all of those who have problems and who are now presenting themselves for help in our American communities. It is imperative that psychiatrists give to them—and to others from whom they may seek help—some understanding of their psychiatric problem and the things that can be done to aid in their rehabilitation.

This situation makes it imperative that we marshal all of our ability and review our knowledge of health and illness. Man starts life with potentialities given him by his inheritance. The full development of these capacities depends on his environment. His capacities to withstand trauma—to avoid susceptibility to infection—to survive infection—to evolve through situations—are dependent on his perfection of development. This perfection of development of man is primarily sustained by his food. The quality and quantity of nutriment either helps or hinders his development. The maintenance of man's capacity to function is dependent on several factors, but the one that is absolutely indispensable is nourishment. The health of man, and, consequently, his efficiency, is dependent on his state of nutrition. His psychobiology and some of his psychopathology are nutritionally determined.

This optimal health and its absence may have more importance than we have heretofore realized or emphasized in individual and mass personality reactions. The possession of this optimal health may be one of the factors in the rise of a nation to a world power. The loss of this optimal health and adjustability may be a factor in the decline of a people. An environment's biological assay is optimal when it produces the maximum growth, development, and function within the hereditary bounds of man, and when it gives him vigor and freedom from susceptibility to acute and degenerative diseases. Does it follow that mass maladjustment or mass psychosis of a nation may be the etiology of war as suggested by White and Stevenson? It is our observation that a person can get along better with himself and with others when well. Group, mass, or national adjustment is a multiplication of individual adjustment with or without complication.

We in psychiatry are daily pondering the multiple reasons for normal and abnormal psychic reactions. The membership of The Association for Research in Nervous and Mental Diseases, appreciating the importance of food, chose *The Role of Nutritional Deficiency in Nervous and Mental Diseases* as the subject for its 1941 symposium. The medical journals have many papers telling of recently acquired knowledge on almost every variety of deficiency—avitaminosis, hypoprotein anemia,

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and mineral imbalance, with therapeutic response when therapy is based on the proper rationale. The London letter in the *Journal of the American Medical Association,* January 29, 1944, told of postwar food planning. "Food experts who have advised the government during the war are now planning for the postwar era. They hold that such a commission will revolutionize agriculture and lay the foundation for prosperity in other basic industries. White bread, margarine, jam, and tea, regarded by large masses of people as a staple diet, will be discouraged. Instead, the people will be given an opportunity to increase their consumption of milk, eggs, fruit, vegetables, and meat. World food policy, with which Great Britain will be closely linked, will be directed to the same end."

It is the physician's responsibility to inform and to lead in a world food policy. We will either lead or be led. Our thought has to the present been chiefly concerned with the inadequate diet and its pathology. We are aware that inadequate nutrition leads to deficiency diseases and, one might add, an unhappy and weakened civilization. In order that we may be aware of what is being discussed by informed laymen, I refer to the procedures of the British Parliament.

Soil and Health was debated in the House of Lords, October 26, 1943, and again on February 2, 1944. The observations of doctors, agriculturists, and other scientists were quoted by informed statesmen. I quote from the speech of The Earl of Portsmouth in the second debate: "I should like today to confine my arguments as far as possible to the findings of a group of people who are scientifically qualified in the highest degree and who have had a long experience of the matter we are discussing. I refer to the group known as the Peckham Pioneer Health Service. They are, as your Lordships are probably well aware, a group of doctors who have investigated over a period of years an urban cross-section of our population. They have confined themselves to no particular class. So that their experiment and their experience may be not made invalid by special arguments, their experiment has been confined neither to very poor income ratios nor to the very high income ratios, but covers a very wide cross-section of the population and a very wide cross-section of occupation as well. The point they were searching for was to produce health, to have research into health and its relationships.

"They have begun with the family as a unit. Arising from their work with the family, naturally the whole question of environment has come in and the most vital member of the family—the mother—has been the subject of their special attention. The noble Lord, Lord Woolton, the day before yesterday, made a most profound and interesting speech to a body called the Food Education Society, and he expressed a wish in that speech that hospitals might become the centres of positive health. With all due deference I feel that the term 'positive health' is there used in its wrong context, because positive health cannot begin with hospitals. Hospitals may be magnificent centres for rehabilitation, for teaching a better way of life to those who have been invalids, but they cannot be centres of positive health. Positive health, in my opinion, and I believe in that of most of those who have thought deeply upon this question, must begin in the womb and indeed in the womb before conception starts, with the health and vitality of the mother. In that connection the doctors working in the Peckham Health Centre discovered that feeding the families in the Centre with the ordinary so-called balanced food diet bought from a shop was not enough. The vitamins and so forth in the ordinary analysis of such vegetables as spinach and in such food as milk were not there; the vitality was not there; and they were forced to turn then to their own farm. They were forced to grow the food themselves, so as to get the beginnings of positive health in the unborn child, and the methods upon which Lord Teviot and others spoke in the debate on 26th October last. They were forced to use not new methods but the ancient method of returning waste to the soil and creating humus."

In America the Year Book of Agriculture for 1938 is published under the title of SOILS AND MEN. Many other publications show that much is being done in America on the subject of nutrition—*Interrelations of Soils and Plant and Animal Nutrition,* SCIENCE, May 12, 1939; *Nutrition and Soil Conservation,* JOURNAL AMERICAN DIETETIC ASSOCIATION, June-July, 1938; *Effect of Soil Treatment on Vitamin Content,* BIOCHEMICAL JOURNAL, September, 1939; *Soils and Nutrition,* ANNALS ACADEMY OF POLITICAL AND SOCIAL SCIENCE, January, 1943; *Riboflavin in Soil,* SCIENCE, July 30, 1943, etc. These point to the relation between the vitality of man and the vitality of the soil from which he feeds.

Now, let us turn to certain observations offering

themselves as indices of the relationship between inadequate diet and neuropathology, which cause both minor personality disturbances and mental symptoms. McLester[8] noted that many of the pellagrins were considered neurasthenic before the objective signs of pellagra became manifest. It is generally accepted that some cases of pellagra depend exclusively on a deficiency of nicotinic acid and that there is often an additional deficiency of thiamine. He suggested that many of the psychiatric symptoms of pellagra depend primarily on insufficient thiamine in the diet.

Tucker[9] says: "The story of pellagra is a long one and one which, in spite of the widely accepted vitamin deficiency theory as to its etiology and treatment, is still unfinished."

Spies-Aring-Gelperin-Bean[10] point out that pellagrins show a multiplicity of complaints—fatigue, insomnia, anorexia, vertigo, burning sensations, numbness, palpitation, nervousness, anxiety, headache, forgetfulness, apprehension, and distractibility. These neurotic symptoms showed a prompt response to nicotinic acid therapy.

Jolliffe[11] and his co-workers were able to produce with a thiamine-poor diet a neurasthenic syndrome in four out of five experimental subjects.

Bowman and Wortis[12] state: "The brain is dependent for its normal functioning on a carbohydrate substrate, an adequate supply of oxygen, and various enzyme and coenzyme systems. A disturbance in any of these constituents interferes with brain metabolism and, therefore, with brain function. . . . Our present knowledge indicates that at least three of the vitamins already isolated are concerned with the proper metabolism of carbohydrates—the preferred foodstuff of normally functioning brain tissue. These are thiamine hydrochloride, nicotinamide, and riboflavin. They regard some neurasthenic syndromes, cortical dysfunction associated with acute peripheral neuropathy, Wernicke's syndrome, pellagra, and delirium tremens as clinical pictures that may result from thiamine and nicotinic acid deficiency.

Wilder,[13] in a discussion of symptoms and signs of thiamine deficiency, concludes: "Moderate prolonged restriction of thiamine but not of food calories is associated with states of emotional instability and changes of attitude and mood reflected by irritability, depression, quarrelsomeness, poor cooperation, vague fears progressing to agitation, restriction of activity, and multiple somatic complaints."

Elvehjem[14] reviews the *Relationship of Enzymes to Deficiency,* and states: "It is possible to conclude from this short review that certain vitamins may be constituent parts of certain enzymes and that these enzymes show a significant decrease during deficiency diseases."

Minot[15] opens his discussion of *The Problem of Nutritional Deficiencies* with this statement: "The present emergency is the most serious emergency in our history. A fundamental condition of a will to victory is a will to be healthy. This implies that food be taken to maintain optimal nutrition. With faulty food, there is faulty nutrition, faulty function, faulty structure, disease."

He concludes with the following statement: "The effects of food on vitality are fundamental and far-reaching. The benefit of better feeding usually becomes more evident after it has been continued throughout a large part of a life cycle and its effects may not be seen until a second generation. The great opportunity for utilization of modern knowledge of nutrition is in the prevention of unstable nutritional states. The prevention is much simpler and vastly more economical than treatment after bodily defects have occurred. The problem of nutritional deficiencies is the prevention of partial deficiency; adequate nutrition is one of the first lines of defense of this nation."

The recognition of certain frank nutritional deficiencies and their cure represents progress in nutritional medicine. It is the minor, or subclinical, states that present an unsolved problem to the physician and the patient. The doctor is not in a position to recognize the latent syndromes and the patient does not appreciate his malnourished state. Therefore, the best therapy is the prevention of both the frank and the partial nutritional deficiencies with their interference of man's function—his psychic reactions. It is the prevention of abnormal psychic reactions that interests us in psychiatry.

We have in the above discussion referred to rather specific disturbances in normal psychic reactions when the individual is malnourished. Malnourishment is not limited to humans. Recent observations have shown pathological reactions in animals when they, too, have been malnourished. For instance, the paralysis, or so-called Bush sickness, of sheep in New Zealand was attributed to the lack of cobalt in the soils and thus in the plants, and the addition of cobalt to the soil is now preventing the paralysis.

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Nutrient disorders in plants occur and have been corrected by the addition of a specific nutrient to the soil—magnesium in sand drown of tobacco; manganese in chlorosis of tomatoes; boron in diseases of the cauliflower and sugar beet; zinc in pecan rosette; sulphur for the yellow of tea. These findings rather indicate that plants are dependent on the soil for a multiplicity of minerals and without them, or without the capacity to use them, they become sick. In addition, it is also pointed out that animals are affected by a deficiency of minerals in the soil. Is the nutrient value of plants to man dependent on the fertility of the soil?' Does it follow that the nutrient value of animal products is also dependent on the fertility of the soil which grows food that the animals consume?

Soil fertility that is optimal for the production of quality foods depends not only on the minerals, its physical structure, tillage, moisture, sunlight, but also on the fauna and flora of the soil. The bacteria play an important part in making air nitrogen available to the plants and in the decomposition of humus. The fungi surround the rootlets and even penetrate them, forming what is known as the mycorrhizal association and what is described by Howard as being the living fungous bridge which connects soil and sap.

McComb[16] and others in comparing mycorrhizal and non-mycorrhizal plants showed that the mycorrhizal seedlings contain four times as much phosphorus as the non-mycorrhizal plants.

There is further evidence that the type of soil fertility affects foods. Kellogg[17] in an article, *Soils and Nutrition,* makes this statement: "Soil conditions and soil management practices, including the use of fertilizers, influence . . . the mineral content of foods."

Recently K. C. Beeson[18] collected the available data on the mineral content of foods, especially as related to soil type and soil management practices. His tables show, for example, that lettuce may contain nearly 0.05 per cent or less than 0.001 per cent of iron. Vegetables of normal appearance may vary 100 per cent in their content of calcium. There are even greater differences in phosphorus, while copper, iron, and manganese may show variations of several hundred per cent. By selecting obviously abnormal specimens, far greater variations are found. Some of the differences are due to variety, some to environmental conditions, especially soil, and some to other causes.

The vitamin content of plants may also be influenced by the fertility of the soil, particularly the humus content of the soil, as pointed out by Carpenter[19] who states: "While studying the occurrence of vitamins in fungi, the question was raised as to whether there was a possibility of finding vitamins in soil. . . .

"The work was confined to riboflavin and this vitamin was found in many 'local soils'.

"From work done at present, we believe that occurrence of B2 is correlated with the amount of organic matter in the soil . . . and that some plants take up vitamins from this source as they absorb essential mineral elements."

These findings point to the fact that riboflavin and minerals in the plants may depend on the humus and mineral content of the soil. Such observations suggest that the quality of the plant is dependent on the fertility of the soil; thus optimal soil fertility predetermines that the plant will have the potential source from which it can possess optimal food value.

The writer pointed out in a recent paper—*The Effect of Agricultural Practices on Health and Disease*—that the diet of the Northern Chinese, although inadequate in vitamins A, C, and D, calcium, and in total calories, biologically assayed higher than our American diet if the presence and absence of degenerative diseases were considered. This suggested an x factor in the produce that was grown by the Oriental agricultural practices, where natural manures are used, and that there is some lack of nutrition in the produce grown by our Occidental agricultural practices, where artificial fertilizers are used.

Howard[1] states: "The principle followed, based on the Liebig tradition, is that any deficiencies in the soil solution can be made up by the addition of suitable chemicals. This is based on a complete misconception of plant nutrition. It is superficial and fundamentally unsound. It takes no account of the life of the soil, including the mycorrhizal association—the living fungous bridge which connects soil and sap. Artificial manures lead inevitably to artificial nutrition, artificial food, artificial animals, and, finally, to artificial men and women."

We have referred to psychopathology resulting from inadequate diet. We have recorded observations that show foods may also have had an inade-

quate diet and, therefore, are inadequate in their potentialities to nourish man as they themselves are malnourished.

In order to prevent deficiency diseases, and especially the subclinical ones, our program will have to be educational. First, the agriculturist must produce the food that is more consistently high in quality. Second, people should be informed what positive health is, and that it must be treasured and guarded with good hygiene. This requires good habits—eating and others. The modern science of nutritional medicine will have to evolve to the stage of prevention. This requires that we know not only the nutrient needs of the human body but the source from which and the means by which it may be obtained. The prevention of deficiency diseases is going to be an educational program—first, of the consumer; second, of the farmer. When the buyer demands and is willing to pay for a quality product, the production of such a product becomes economically sound. It will be then and then only that we shall be able to buy quality foods that have the capacity to give optimal nutriment to our bodies.

There seems to be a correlation between deficiency diseases and some pathological psychic reactions. Malnutrition is etiological of deficiency diseases; deficiency in nutrition is due in part to soil deficiency—poor fertility; deficiency in soil fertility is the source of food poor in quality and, therefore, inadequate to maintain optimal health. Thus, soil fertility becomes a factor in the psychobiology of man.

We in medicine are interested in optimal health, and in psychiatry we are vitally concerned with malnutrition as it affects psychobiology. It is for this reason that we find ourselves today interested in the source of malnutrition—soil, an impoverished soil, as a cause of an impoverished people with psychopathological complaints.

In order to treat, we will have to understand health and disease of the soil. A fertile soil is alive with its bacteria, fungus, and protozoa. The maintenance of this microscopic life seems to be as vital for the plant as the intestinal flora is for man's nutrition. The nutrition of this microscopic life in the soil demands that we concern ourselves about its environment—the food supply, the oxygen supply, and the physical condition of the soil. The optimal health of the bacteria, the fungus, the protozoa, and the earth worms takes on vital importance in the maintenance of a food supply to human beings that is adequate in quality as well as in quantity. Today when the soil is being called on to furnish nutrition to large urban populations and to produce so much raw material, especially at this time for synthetic rubber and fuel, the maintenance of soil fertility becomes a greater problem.

The ancient agricultural practices of supplying the soil with nutrition for its life by returning all things and the refuse of all things to the soil is no longer practiced, or, perhaps, possible. The multiple demands of protoplasmic growth seem to be best satisfied by natural manures. However, if chemical substitutes must be used, let us supply more completely the protoplasmic need. At the same time the effect on the microscopic life in the soil which is vital to man's vitality must not be destroyed.

Man's interference with the perfect balance between the natural processes of growth and decay may be largely responsible for the predicament of our malnutrition. Howard[1] states that "the agriculture of ancient Rome failed because it was unable to maintain the soil in a fertile condition. The farmers of the West are repeating the mistakes made by Imperial Rome. The soils of the Roman Empire, however, were called upon only to assuage the hunger of a relatively small population. The demands of the machine were then almost non-existent. In the West there are relatively more stomachs to fill while the growing hunger of the machine is an additional burden on the soil. The Roman Empire lasted for eleven centuries. How long will the supremacy of the West endure? The answer depends on the wisdom and courage of the population in dealing with the things that matter. Can mankind regulate its affairs so that its chief possession—the fertility of the soil—is preserved? On the answer to this question the future of civilization may depend."

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A New Magnet for Foreign Bodies in the Food and Air Passages.

A new type of magnet, by which magnetizable foreign bodies in the stomach and windpipe can be removed, thus eliminating operations which often are necessary to remove such objects, is described in *The Journal of the American Medical Association* for January 15 by Murdock Equen, M.D., of the Ponce de Leon Eye and Ear Infirmary, Atlanta, Ga.

The magnet is composed of alnico, an alloy of aluminum, nickel, cobalt and iron. For the past two years, Dr. Equen says, the new alloy magnet has been available as a small permanent type for use in removing foreign objects from the eye.

The instrument reported for use of the magnet is composed of a tube to which the magnet is attached and which is introduced into the stomach through the mouth and esophagus. At the other end of the tube is a rubber bulb which is used for inflating the stomach. This inflation lifts any collapsed portion of the stomach from the foreign object, such as a pin, allowing the magnet to be passed about freely, and the foreign body is thus unimpeded in being attracted by the magnet.

As Dr. Equen explains, the removal of foreign bodies from the stomach and windpipe by means of the gastroscope and flexible forceps is a very difficult procedure. The constant shifting of the position of the foreign body, in a space as large as a stomach, makes it very difficult to establish contact between the forceps and the object.

Alnico magnets require a considerably stronger magnetizing force to magnetize them completely than do other types of permanent magnet alloys, the author says. At the same time, alnico has more available external energy or attracting power for a given volume or size than has any other permanent magnet material known at the present time.

Dr. Equen presents in his paper a case report that he says is typical of the entire series of cases of foreign bodies removed by the new magnet. He tells of a girl aged 19 months who had swallowed her mother's hairpin twelve hours previous to the time the baby was brought to him. The new instrument was passed down the esophagus and introduced into the stomach of the child. This was done against a background of a fluoroscopic screen which revealed by means of x-ray the position of the hairpin and also of the magnet. The stomach was then inflated, the pin quickly coming into the range of the magnet to which it was attracted and then withdrawn from the stomach. The entire procedure lasted only eight minutes, he said.

"The new alloy magnet, alnico," Dr. Equen concludes, "is being proved of great value to medicine. For the past two years it has been available as a small permanent type eye magnet. Only a minority of foreign bodies of the food and air passages are magnetizable, but among those which are the use of this instrument will render unnecessary many abdominal operations and decrease bronchial instrumentation."

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CLEIDOCRANIAL DYSOSTOSIS—REPORT OF CASE*

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This disease which affects the ossification of the clavicles and the membrane bones of the skull, and presents certain aberrations of the dental system, was first reported by Meckel[1] in 1760. Marie and Sainton,[2] in 1897, were the first to describe the syndrome as hereditary cleidocranial dysostosis and recorded four cardinal characteristics by which the disease may be recognized: (1) aplasia, more or less marked, of one or both clavicles; (2) exaggerated development of the transverse diameter of the cranium; (3) delay in ossification of the fontanels, and (4) hereditary transmission. One or more of these characteristic features may vary, but the clavicular deformity appears to be the most essential feature to the diagnosis. The cause of the disease is unknown. It is thought to be hereditary, however, not necessarily so, as cases are reported to appear spontaneously and are described as of mutational origin capable of being transmitted, thus becoming a dominant Mendelian characteristic.

The clavicular defects may permit unusual mobility of the shoulders, frequently to the extent that both shoulders may be brought forward and medially until they both touch each other.

Cleidocranial dysostosis may be overlooked in a general physical examination. In 1943, Rankow[3] (Captain (D.C.), U. S. Army) reported two cases in the army both of which were encountered within a six month interval; the first, at the Aberdeen Proving Ground, Maryland; the second, at Camp Sibert, Alabama. It has been stated that most patients affected with this disease do not as a general rule consult the medical profession concerning themselves, as they are usually well and consider themselves normal, being free from any discomfort. On the other hand, the dentist will be conferred with rather frequently because of the magnitude of the dental problems involved. The unique dental findings often lead to a diagnosis.

Several men recently have contributed much to the dental conditions and findings in this very rare disease (at present around 250 cases have been reported). Thoma[4] concludes that the following dental conditions are associated with cleidocranial dysostosis: (1) micrognathia of maxilla; (2) persistence of deciduous teeth in both jaws; (3) unerupted permanent teeth in maxilla and mandible; (4) unerupted supernumerary teeth; (5) displacement of the teeth; (6) morphologic changes, such as cone shape. A recent report of four cases by Millhon and Austin,[5] of the Dental Department of the Mayo Clinic, substantiates the consistency in the dental findings of Thoma. Winter[6] has presented an excellent review of cleidocranial dysostosis up to 1944. These investigators find that the oral manifestations are fairly constant and present definite characteristics in this disease. The maxilla is under-developed, presenting a high V-shaped palate which may be furrowed through the median line or in some cases a small cleft. The mandible appears to be prognathous. There is a failure of the deciduous teeth to be exfoliated normally. The permanent teeth lose their eruptive stimulus and remain embedded in the maxilla and mandible, completing their development unerupted. There is a high incident of supernumerary permanent teeth along with some geminated teeth. The unerupted teeth are usually lying in an irregular arrangement. Some may even be inverted. The development of dentigerous cysts from tooth follicles of some of the unerupted teeth have been reported.

Cleidocranial dysostosis must be differentiated from other diseases, as some of the dental findings may be found in cases of rickets, pseudo-anodontia, congenital syphilis, craniofacial dysostosis, achondroplasia, cretinism, and in some other cases of dysfunction of the endocrine system. However, the clavicular defect appears to prove the specificity of the syndrome. Yet, Rhinehart[7] reported a case of multiple dysostosis which he considered came under the classification of cleidocranial dysostosis, but differed from the standard description and the interpretation of the name because of the absence of defects of the clavicles.

CASE REPORT

On November 17, 1943, Mrs. J. L., a married white woman, age 29 years, came to me, having

*Read before the monthly meeting of the Roanoke Academy of Medicine, Roanoke, March 6, 1944.

been referred by her dentist for the removal of her teeth, together with the removal of several unerupted and impacted teeth.

The patient had been wearing an upper partial denture for 15 years and a lower partial denture with a high furrowed V-shaped palate. Prognathism of the lower jaw was evident.

Roentgenographic Examination. The dental roentgenographic examination (Fig. 1) revealed about twenty-six unerupted and impacted teeth. A great

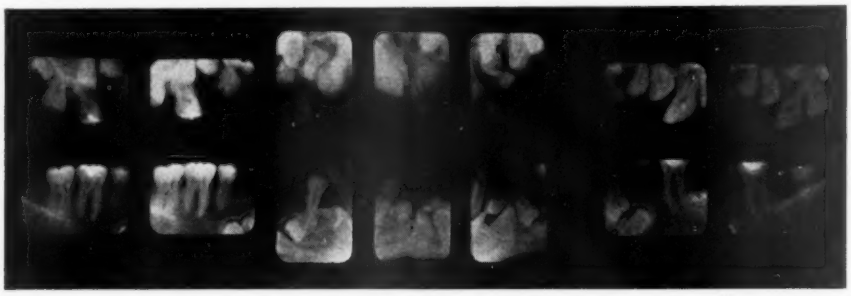

Fig. 1.—Dental roentgenograms showing numerous unerupted and impacted teeth and their irregular arrangement.

for 10 years due to the fact that she had so few teeth that had ever erupted after having had most of her baby teeth extracted. An erupting cusp of the lower left cuspid region was visible. This erupting cusp was giving trouble which forced her to seek dental treatment at this time, together with the hypersensitiveness of the erupted teeth that showed areas of exposed dentin about their necks and some caries.

History. There was an uneventful history of the usual childhood diseases. The patient was a housewife, finished high-school at the age of 18 and married at the age of 20. She has one son living who is apparently normal, 3 years of age. She stated that about eight months ago she had a miscarriage and her attending physician told her it was due to the hypersensitiveness of her teeth which she stated was almost unbearable during that period, along with severe pains in her jaws.

Her father died from cancer about four years ago and her mother, age 61, is still living. Her mother is affected similarly with this syndrome. The patient has a younger sister who is living and of normal health and size.

Examination. The physical examination was essentially negative, except, I might say, the patient was small of stature and gracefully built, which is usually seen in these cases. The height was 59 inches, weight 92 pounds. The skull showed a moderate bulging of the forehead with prominent bosses. The maxilla was small and under-developed many of these teeth were lying in an irregular arrangement. In the upper and lower anterior regions the unerupted teeth appeared to be in clusters, with some being inverted.

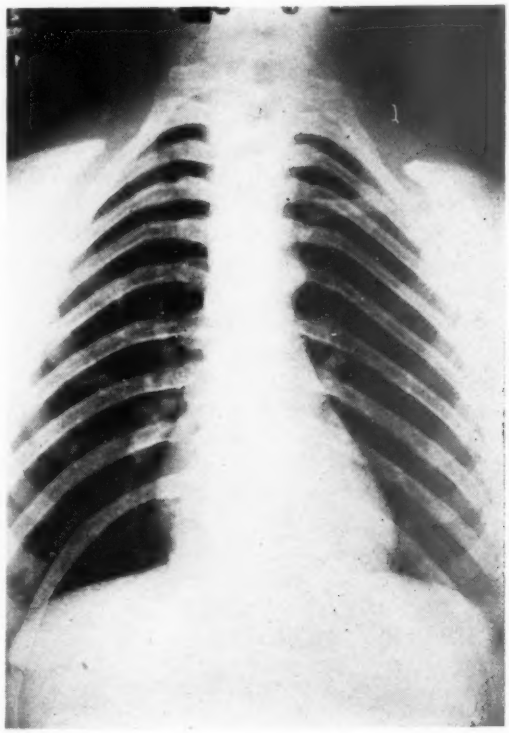

Fig. 2.—Roentgenogram of chest showing clavicular defects.

The skeletal defects were demonstrated by Dr. W. E. Overcash.† His findings were: "A flat film of the chest (Fig. 2) shows the heart to be normal in size and contour, the diaphragms to be smooth and the lung fields to be clear. There is no abnormality of the ribs, but the left clavicle is entirely missing except for a small stump measuring 2½ cm. in length at the sternal end. On the right the two ends of the clavicle never fused in their development, being separated in the middle third and somewhat overlapping. There is spina bifida occulta of the first and second dorsal vertebrae.

"Antero-posterior and lateral films of the skull (Figs. 3 and 4) show a brachycephalic skull with prominence of the frontal bosses. The lower jaw is rather prominent giving some prognathism. The frontal sinuses are very small and the mastoids show very little pneumatization. The sella turcica is not enlarged. There is some thickening of the vault

Fig. 3.—Antero-posterior roentgenogram of skull.

both anteriorly and posteriorly. There are numerous small Wormian bones along the suture lines. There is a metorpic suture present in the frontal bone. Numerous unerupted teeth are seen in the maxilla and the mandible. These films show the rather typical changes of cleidocranial dysostosis. Other

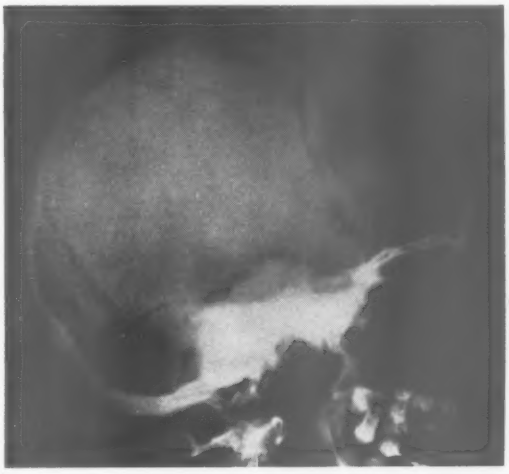

Fig. 4.—Lateral roentgenographic view of skull showing abnormalities.

films of the skeleton should be taken to rule out other congenital anomalies."

COMMENTS

This is undoubtedly a case of hereditary cleidocranial dysostosis. As has been pointed out these cases present dental problems of great magnitude. It is unknown just why the deciduous teeth fail to be shed normally and persist, or why the permanent teeth lose their eruptive stimulus and fail to erupt and remain embedded in the jaws throughout life, or why there is an over-activity of the dental organs in forming so many supernumerary teeth.

It has been proved that the extraction of the deciduous teeth at any time will not aid in the eruption of the permanent teeth and is contraindicated; instead, the deciduous teeth should be given the utmost care. If the deciduous teeth are lost they should be replaced by prosthetic appliances even though the edentulous areas contain many unerupted teeth. Those patients who have had their deciduous teeth removed or have shed them and wearing artificial dentures frequently need to have a tooth removed, as a cusp of an embedded tooth will occasionally make its appearance through the mucous membrane. The removal of all the embedded and

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impacted teeth before the insertion of full dentures is, likewise, contraindicated, because there would be so great a destruction of the alveolar bone and ridge that it would make the fitting and wearing of dentures very unsatisfactory. It appears that it is good practice to remove only those teeth which are very near the surface and later those that make their appearance from time to time throughout life. Dental radiographic examination should be made at regular intervals. Orthodontic treatment appears to be of no avail; however, the orthodontist should assist as much as possible in an effort to correct the dental irregularities and jaw relations. Bilateral osteotomy may have to be performed to correct the prognathous condition of the lower jaw.

Surgical intervention may have to be instituted in case of disturbances that may arise from some of the skeletal anomalies.

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501 Medical Arts Building.

Education for the Public on Whooping Cough.

With the peak of the 1,000,000 cases of whooping cough coming at this season, the current Upjohn educational message on pertussis, appearing in full color pages in the *Saturday Evening Post, Life, Time,* and other national magazines, will be seen by an estimated ten million readers. Many of these are unaware of the seriousness of pertussis and of the fact that by modern means the majority of cases can be prevented.

The message is illustrated by a painting of an appealing little girl by the distinguished artist Simka Simkhovitch, and asks the reader: "What if you could make almost sure she'd never get whooping cough?" It urges mothers to take their children to their doctor for immunization or to call him promptly in case the child has already contracted whooping cough.

This message is one of a series on health education, sponsored by The Upjohn Company of Kalamazoo, Michigan. Other messages have discussed pneumonia, rheumatic fever, and blood plasma, always from the point of view of the doctor speaking humanly to his patients. Future subjects will be pregnancy, the menopause, and stomach ulcers.

The "Continental" Breakfast Is Not Suitable for a Growing Child.

In far too many homes, a breakfast of a roll and a cup of coffee is the fare for children as well as adults. Woefully deficient in vitamins and minerals, such a meal furnishes little more than a small amount of calories. A dish of Pablum and milk, however, is just as easily prepared as a "continental breakfast," but furnishes a variety of minerals and the vitamin B complex, not found so abundantly in any other cereal or breadstuff. The addition of a glass of orange juice and one Mead's Capsule of Oleum Percomorphum can easily build up this simple breakfast into a nourishing meal for the children of the family as well as the adult members. It is within the physician's province to inquire into and advise upon such nutritional problems, especially since Mead Products are never advertised to the public.

MINIMAL PULMONARY TUBERCULOSIS

E. S. RAY, M.D.,
Richmond, Virginia.

In the past few years the discovery of minimal pulmonary tuberculosis has markedly increased. As the result of active case finding programs, including mass surveys in industry and x-ray examinaton of inductees, many asymptomatic, early tuberculous lesions have been found. Colonel Freer,[1] in a recent survey of the experiences of several Army induction stations, found that approximately 1 per cent of those examined were rejected because of pulmonary tuberculosis. Therefore, about 150,000 men can be expected to be turned down by the Selective Service System because of tuberculosis. Of this number, about one-half will have active pulmonary tuberculosis and will need treatment. Hilleboe and Gould[2] reveal that "during the year and a half ending in December, 1943, the field units of the Public Health Service have surveyed 117 industrial and other population groups in eleven states, the District of Columbia, and Mexico City. A total of 559,306 individuals have been examined, of whom 5,648 showed x-ray evidence of significant re-infection tuberculosis. This constitutes 1 per cent of the persons examined. Of these 5,648 positive films, 62 per cent were minimal, 31 per cent moderately advanced, and 7 per cent far advanced in extent." As the result of these surveys, as well as the more extensive use of routine chest films in private practice, the problem of minimal pulmonary tuberculosis has become one of major importance. Eradication of tuberculosis rather than its control becomes the major objective of those interested in this disease; the proper handling of all early lesions is paramount for the success of this program. The organized anti-tuberculosis organizations in the State must assume the major responsibility in the handling of these cases, but, because of their large number, many of these early cases must be handled by private physicians.

The first problem in the handling of minimal pulmonary tuberculosis is to determine the stability of the lesion and this may be extremely difficult. If the lesion casts a stringy shadow on x-ray, suggesting fibrosis, it is probably healed or in an arrested state. This type of lesion should be handled as any other arrested case, e.g., periodic x-ray examinations. If the shadow on the chest film appears "soft" and mottled, having the appearance of a small pneumonic infiltration, one must conclude that the lesion is active and the patient so treated. If a previous chest film taken within the past four or five years does not show the lesion, one should assume that the disease is active.

Unfortunately, the activity of a large number of lesions cannot be determined from x-ray alone. History of cough, malaise, easy fatigue, weight loss, etc., are important in determining activity, but few of the early lesions produce symptoms. Physical examination likewise is rarely of aid in establishing the stability of the lesion. It is in these cases of questionable activity that the most sensitive methods of demonstrating tubercle bacilli must be employed. Because these patients fail to raise sputum, it is necessary to obtain fasting gastric contents and culture the centrifuged material. This should be done on three consecutive mornings. However, it is to be remembered that in the majority of active minimal lesions one cannot demonstrate tubercle bacilli in gastric contents even on culture. The patient is followed with frequent fluoroscopic examinations and is again x-rayed at the end of six weeks. At this time the stability of the lesion is again evaluated in the light of any roentgenographic change that may have occurred, as well as the result of the culture of the gastric contents. If the lesion remains unchanged by x-ray and the culture is negative, the patient continues to be followed closely by frequent fluoroscopies and chest films for at least a year. Examinations are then continued at three to six month intervals for variable periods of time, depending upon the age of the patient: the younger the patient, the longer is the period of follow up. In young adults, unless close observation can be carried out, the lesion should be handled as an active one. In the negro race the lack of resistance is so striking that every minimal lesion of doubtful stability should receive treatment. It is not unusual in this race to see a minimal lesion progress to an advanced stage in only a few weeks.

From the Department of Medicine, Medical College of Virginia, Richmond.

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Zachs[3] studied 536 cases of pulmonary tuberculosis in the second decade of life over a period averaging four years. During this time he found extension of the disease occurred in two-thirds of the minimal cases. The seriousness of minimal pulmonary tuberculosis has also been emphasized by Stein and Israel.[4] They state that sixty-six asymptomatic cases were observed in the clinic of the Henry Phipps Institute over a period varying from one to five years. During this period the disease progressed in thirty of the sixty-six cases, twelve of whom died (eleven of the latter were negroes).

The early infiltration may be absorbed almost completely, leaving only a few fibrous strands or it may spread, become caseous and liquefied in its center and ulcerate into a bronchus. The rate of these changes varies greatly. Rapid progression is not uncommon among young adults. The opportune time for securing maximum results from treatment is in this early phase, preferably before there are any systemic symptoms and before secondary bronchogenic lesions have developed. To wait for the lesion to give indubitable evidence of its activity usually means that the best opportunity for cure has been lost.

Both the medical profession and the public now require education in the need for early treatment of tuberculosis. When an early asymptomatic lesion is discovered, there is a tendency on the part of the physician to reassure the worried patient or his agitated parents. In some instances, unfortunately, the reassurance takes the form of denying either the existence of the lesion or its significance. This opinion is usually given after a physical examination fails to reveal an abnormality. When there are few symptoms, or none at all, it is very difficult to convince the patient of the necessity of treatment over a period of months. Consequently, many of these cases will refuse not only to enter a sanatorium, but, also, to follow a routine of bed rest at home. It is only through education of the public in the seriousness of active minimal lesions that this obstacle will be overcome.

The basis of treatment in pulmonary tuberculosis is bed rest, and this applies to all active cases regardless of the size of the lesion. The sooner and more strictly this rest can be instituted, the more effective it is likely to be. The younger the person, the more likely the labile lesion, and the greater the need for prolonged rest.

The great advantage of the rest "cure" in a sanatorium has been amply proved and every effort should be made to have these cases hospitalized. A very important function of the sanatorium is the education of the patient. He is given a complete understanding of his disease; this is necessary for anyone suffering from a chronic affliction. The chronic, relapsing character of the disease is emphasized, and he is taught the logic of a routine of rest and regulated activity. It is impossible for the physician to satisfactorily instruct the patient when treatment is carried out in the home. It is necessary not only to get the patient well, but to keep him well; and this can be accomplished only by a patient's thorough education in the importance of the proper rest routine that must be adhered to for the remainder of his life.

An initial period of two to four months of strict bed rest is desirable. The length of sanatorium care varies, of course, but usually a period of six to nine months is sufficient. Most patients can then gradually resume their normal activities, but definite limitations for several years are usually necessary. If, because of socio-economic reasons, a prolonged period of modified rest cannot be obtained, pneumothorax is indicated in order to safeguard the patient after his discharge from the sanatorium. If a lesion fails to respond satisfactorily to bed rest alone, or if an increase in the disease occurs, pneumothorax is then indicated. However, because of the excellent therapeutic response of the majority of white patients to bed rest alone, and because of the occasional hazard of pneumothorax, this procedure is not recommended as a routine measure. In the negro, because of his lack of natural resistance, every active minimal lesion should have pneumothorax in addition to bed rest.

Because of the shortage of beds for tuberculous patients in this State, it is impossible to have all of these cases admitted to a sanatorium. Consequently, in many cases the private physician must assume the responsibility of carrying out the routine of rest in the home. With the prospect that early tuberculosis will continue to be discovered in increasing numbers, every effort should be put forth to make sanatorium care easily accessible to these cases. Eradication of tuberculosis depends upon adequate treatment of all tuberculous lesions. This can be accomplished only by proper sanatorium facilities. It serves no useful purpose to carry out an extensive

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Medical Society of Virginia Cancer Committee

Room 383, Medical School Building, University, Virginia

March 1, 1945

The Biopsy

The following case history is recorded at one of the tumor clinics certified by this Committee:

A man in the cancer age, on a clinical diagnosis of cancer, received antiluetic treatment for a persistent sore on the lip. It was six months before the patient was referred to the tumor clinic with an obvious extensive carcinoma which had already metastasized. No biopsy had been done.

The biopsy is one of the most valuable methods of diagnosis available. Omission of or delay in carrying out this simple but essential procedure, when indicated, on discovery of lesions even remotely suspicious of cancer cannot be condoned. It is impossible in the limits of this bulletin to discuss contraindications to biopsy. They will be taken up in later bulletins on specific conditions. When in doubt, the patient should be referred to an expert.

A biopsy is most valuable when it is considered the basis for consultation between clinician and pathologist. The pathologist can give an accurate opinion only when the tissue is accompanied by pertinent information from the history, physical, and laboratory examinations, as well as a description of the lesion and accurate location of the site of biopsy.

The actual technique varies with the individual lesion, but the following general suggestions should be helpful.

1. Be generous in the amount of tissue submitted and gentle in its handling. Minute fragments squeezed between forceps during removal are usually useless for microscopic study.

2. If, because of the size of the lesion, total biopsy (complete excision) is impractical, it is often desirable to take several specimens from a single lesion. These should be numbered and accurately located so that both surgeon and pathologist will know where in the lesion specific changes have occurred.

3. The advancing edge of the lesion is frequently more illustrative of the essential pathological change than is its center. The biopsy should include both normal and abnormal tissue.

4. Avoid necrotic tissue.

5. Tissue from an accessible lesion is best obtained by sharp scalpel dissection. The use of the electric knife in obtaining material for pathological study is permissible when the line of excision does not pass through the lesion. The hot cautery is not recommended for biopsy work, coagulation being too extensive.

Because it crushes tissue, the punch forceps should be reserved for removal of specimens through an endoscopic instrument.

Aspiration biopsies of solid tumor should be done only at the request of the pathologist.

6. Satisfactory histologic sections cannot be made from tissue which has become dry. If the specimen cannot be given to the pathologist immediately after excision, it should be fixed in about 10 times it volume of 10% formalin (4% formaldehyde).

The diagnosis of cancer on cells found in pleural or ascitic fluid can be made only when the fluid is absolutely fresh.

All lymph nodes and large masses should be bisected before fixation to permit thorough permeation of the fixative.

7. The modern plastic mailing tube with cardboard container is the simplest and least expensive of mailing devices. These can be obtained from any druggist. Larger specimens, according to postal law, must be placed in water tight containers and then wrapped with enough absorbent material to take up leakage.

WHEN YOU DISCOVER A LESION AROUSING SUSPICION OF CANCER, PROVE OR DISPROVE THAT SUSPICION AT ONCE. "WATCHFUL WAITING" IS HERE SYNONYMOUS WITH CRIMINAL NEGLECT.

Please detach and file for future reference.

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case finding program to discover early tuberculosis unless we are prepared to treat it adequately.

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2. Hilleboe, H. E., and Gould, D. M.: Conquest of Tuberculosis in Industry, *J.A.M.A.*, 241-244, May 27, 1944.
3. Zacks, David: Pulmonary Tuberculosis in the Second Decade of Life, *Am. Rev. of Tuber.* **39**:683-713, 1939.
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Medical and Surgical Relief.

Mr. Arthur Kuniznger, treasurer of the Medical and Surgical Relief Committee, has announced that for the six month period ending December 31, 1944, the Committee's donations to 21 countries including the United States, amounted to $43,669.87.

The territory covered by the Committee has increased as the number of liberated countries has increased, and contributions now reach France and Italy. United States tops the list of beneficiaries with $16,386.48 worth of medical, surgical and dental supplies of which the U. S. Navy got $3,542.13, the U. S. Army $1,025.40 and various civilian hospitals and welfare agencies the balance of $11,818.95. The greatest number of shipments for this period went to China and India, while the most valuable single contribution amounting to $4,951.76 went to L'Entre Aide Francaise for the relief of French children.

Surgeon General Stitt Honored.

A gold medal and an honorarium of $500 for outstanding service in the field of tropical medicine were presented on February 5, in New York to Rear Admiral Edward R. Stitt (retired), former Surgeon General of the United States Navy, by the American Foundation for Tropical Medicine. The presentation was made on behalf of the Foundation by Col. Richard Pearson Strong (M.C.), director of tropical medicine at the Army Medical School, Washington, D. C., and recipient of last year's award, before representatives of business, medicine and educational institutions.

In conferring the award, Colonel Strong said that "Rear Admiral Stitt is an exponent of scientific truth in his medical publications and reviews. His leadership, inspiring example and devotion to work in the field of tropical medicine through many years have justly won for him the epithet of 'Father of Tropical Medicine in the United States'."

The medal and honorarium were established in 1944 through a gift by the Winthrop Chemical Company. Known as the Richard Pearson Medal and bearing a profile of Dr. Strong on its face, it is to be awarded annually for distinguished service in tropical medicine.

Protein in Soy Milk Approximate Utilization of Egg Protein.

Investigations recently conducted at Wayne University in Detroit have shown the soy proteins in Mull-Soy to have an average true digestibility of 89.6 per cent and an average biological value for maintenance of 95.6 per cent, compared with egg protein as 100 per cent.

The findings of this study, using adult human subjects, were published in a recent issue of the *Journal of Nutrition*, **28**:209, 1944. The method of Murlin and associates was used to determine biological values.

Mull-Soy, a product of The Prescription Products Division of the Borden Company, has been used extensively for infant feeding, and also for children and adults, as a palatable, well-tolerated and easy-to-digest milk substitute.

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DIPHTHERIA IN NINETEEN DAY OLD BABY—CASE REPORT*

CATHERINE W. R. SMITH, M.D.,
Formerly Medical Officer, U. S. Public Health Service at Abingdon, Virginia; now with Muscogee County Health Department; Columbus, Georgia.

The peak incidence of diphtheria is ordinarily given as between two and five years of age. A transitory period of life during which the child enjoys an almost complete protection against attacks of diphtheria is given as the first six or nine months after birth. It is generally thought that insusceptibility of the new born baby is due to passive antibody transfer from the mother (through the maternal blood and through the milk).

Some physicians are so strong in this belief that they have told mothers of small infants (where older children had diphtheria in the home) that it is absolutely impossible for the infant to contract the disease.

I wish to present a case report which is an exception to the above opinion. It is a case of diphtheria occurring in a nineteen day old breast-fed infant where the mother was found to be Schick negative. To date this is the youngest case of diphtheria I have been able to find on record.

REPORT OF CASE

A. R.—A white, male infant (born September 18, 1943) was taken when he was nineteen days old (October 7, 1943) to the local physician for treatment of what the parents believed to be a cold. They told the physician the infant's nose was "stopped up" and he "felt hot". The physician found the child to have excessive mucous discharge from the nose, and noisy breathing. He prescribed a diaphoretic and sedative.

The infant showed no improvement; consequently, two days later (October 9, 1943) the mother took him by train to another physician about fifteen miles distant. On physical examination, the physician stated, the child appeared to be extremely sick. The temperature was 101°. The skin turgor was poor. There was a bloody-purulent discharge from the left nostril with a distinctive and characteristic odor of Klebs-Löffler infection. The throat was injected but showed no membrane. A nasal swab was taken at this time and mailed into the State Laboratory about thirty miles distant; the swab reached the laboratory the next day. It was reported positive for diphtheria.

The next day the local physician gave the infant 1000 units of diphtheria anti-toxin.

The infant's clinical symptoms cleared completely in about ten days after anti-toxin was given, but he carried consistent positive throat and nasal swabs until December 21, 1943 (approximately two and one-half months).

On investigation of the home by the Health Department, a five year old brother of the infant was found to have a positive throat swab for diphtheria; and a history of this boy revealed the fact that he was ill at the time the infant was born, with temperature, nasal obstruction, difficulty in swallowing food, and a cough. The father stated that pieces of membrane came from the boy's nose on several occasions. A physician was not called for the boy. He had been in the room and played around the infant. He carried a positive throat swab until November 4, (which was probably around six weeks).

At the age of four and one-half months a Schick test was done on the infant; this was entirely negative. It was repeated at the age of eight months with negative results.

A Schick test was done on the mother, and found to be negative. Since it was not done until recovery of the infant we are merely assuming that she carried a negative test previously. (She was apparently well and healthy during the child's illness and had a negative throat swab).

At the time a Schick test was done on the infant, other members of the family were tested. The five year old brother, of course, had a negative Schick test. One sister, a nine year old school girl had a positive Schick test, although she had two doses of toxoid previously. Her throat swab at the time of the infant's illness was negative. A two year old sister had a positive Schick test. These Schick tests were done four months after the infant's illness.

COMMENT

Although this is a typical case of nasal diphtheria, it is interesting from the standpoint of the age of the

*This paper has been approved for publication by the Surgeon General of the United States Public Health Service.

child. It is the youngest case I have been able to find on record.

It is the general opinion of the medical profession that it is difficult to establish immunity in an infant by injections of vaccines (etc.) before it is six months of age; consequently, no immunizing procedures are recommended before this age. In this particular infant it appears that natural immunity was established before this age (by the disease itself) as revealed by the Schick test.

It will be interesting to follow this child as it becomes older to see if this immunity is retained.

SUMMARY

A case of nasal diphtheria has been reported in a nineteen day old breast-fed baby. Schick tests showed that immunity was established before six months of age by an attack of the disease itself.

NOTE. Dr. Charles Clendenen, of Damascus, and Dr. Heinz C. Meyer, of Konnarock, have been of assistance in the preparation of this report by submitting information on the physical findings.

New Books.

The following are recent acquisitions to the library of the Medical College of Virginia and are available to our readers under usual library rules:

The Arlington Chemical Co.—Proteins and amino acids. 1944.

Bailey, Percival—Intracranial tumors of infancy and childhood.

Beals & Brody—Literature of adult education.

Beck, S. J.—Rorschach's test. I. Basic Processes.

Blackfan, K. D. & Diamond, L. K.—Atlas of the blood in children.

Bogert—Deitetics simplified.

Boshes, B. ed.—A review of medicine by members of the Faculty of Northwestern University Medical School.

Bucy, P. C. ed.—The precentral motor cortex.

Cordell—The medical annals of Maryland, 1799-1899.

Dampier—A shorter history of science.

Fulton—Physiology of the nervous system. 1943.

Gardner, A. D.—Bacteriology for medical students and practitioners.

General surgery, v. 2, 1919; v. 2, 1920, 1928.

Goldzieher, M. E.—Adrenal glands in health and disease.

Gorton, D. A.—The history of medicine. In two volumes.

Grinker—Neurology. 1943.

Jacobs, ed.—The chemistry and technology of food and food products. v. 2. 1944.

Jones—Structure and function as seen in the foot.

Lex—Metabolism manual.

Lillie—The Woods Hole Marine Biological Laboratory.

Lloyd, J. U.—Elixirs.

Logan, R. W.—What the negro wants.

Martindale—The Extra Pharmacopoeia. v. 1. 22nd. ed. 1941, and suppl.

Moore—Personal mental hygiene.

Moulton, F. R.—The world and man as science sees them.

Mumey—Quartercentenary of the publication of scientific anatomy—1543-1943.

Muse—Textbook of psychology.

Myerson, M. C.—Tuberculosis of the ear, nose and throat: Including the larynx, the trachea and bronchi.

National Foundation for Infantile Paralysis—Collected reprints of the Grantees. Vol. IV, 1943.

Parents International League—The science of living.

Quigley—The national malnutrition. 1943.

Richards, H.—Universe surveyed.

Sachs, Hanns—Master and friend.

Scheinfeld—Men and women.

Schoengold, ed.—Encyclopedia of substitutes and synthetics.

Stokes, Beerman and Ingraham—Modern clinical syphilology.

Taber, C. W.—Taber's dictionary of gynecology and obstetrics.

Taylor, G. W. and Nathanson, I. T.—Lymph node metastases. Incidence and surgical treatment in neoplastic disease.

Templeton, F. E.—X-Ray Examination of the stomach: A description of the Roentgenologic anatomy . . . duodenum.

Thacher—Military Journal of the American Revolution.

Transactions of the American Surgical Association. Vol. LXII, 1944.

Transactions of the Wisconsin Academy of sciences, arts and letters. v. 35, 1943.

U. S. Grant Post No. 327—In honor of Lewis Stephen Pilcher.

Wendt, G.—Science and the world of tomorrow.

Wiggers, C. J.—Physiology in health and disease. 1944.

Winthrop Chemical Co.—Penicillin. Annotated bibliography. 1944.

Yearbook of General Medicine—1944.

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CORRESPONDENCE

Policies on Health Services in the School and Community Health Programs.

After being informed of the action of the Council at its meeting on February 1 (page 134), Major Graves wrote Dr. Mulholland the following letter:

STATE BOARD OF EDUCATION
Richmond 16
February 21, 1945.

H. B. MULHOLLAND, M.D.,
President, Medical Society of Virginia,
Charlottesville, Virginia

DEAR DR. MULHOLLAND:

In talking with a member of your association committee concerning paragraph 2, in the resolutions you have recently adopted,

> "Disapproves equally all other aspects of this project as carried out in the experimental counties."

I would like to make the following statement:

The Policy under which we are working in the school-community health program in the public schools has been discussed by the State Department of Health and numerous physicians over the State.

The action, which was taken in disapproving the project, as far as I can determine, was based on a misunderstanding caused by a misinterpretation in the field, giving reason for a belief that we were not living up to our established policy.

This misunderstanding has been cleared up with those concerned and I respectively request that the resolution be reconsidered so that the project can go forward according to the policy with the cooperation of the Medical Association.

Sincerely yours,
ELIOT V. GRAVES,
State Supervisor, Health Education and Director of the Project.

The following is statement of the policy which the State Department of Education is endeavoring to follow, as outlined by Major Graves:

Health Service, which includes diagnosis and treatment, is a function of medical and public health professional personnel, and is not a function of educational personnel.

In the functioning of a school-community health program, an initial approach to medical personnel shall be made with the county health officer, and the public health officer where such exists, before definite plans are made to promote the correctional work. All local physicians should be approached in order to ascertain to what extent they are able to render health services over and above their regular practice. Care must be taken to prevent the parent or pupil from expecting the impossible in the way of health service.

Where hospitalization of an individual is under consideration, it should be arranged on the basis of the diagnosis and advice of the family physician. Physicians should have a knowledge of arrangements, what surgeons are rendering the service, and should indicate their choice of operator. In cases where family physicians cannot be designated, a local physician or public health officer should make the diagnosis. The general policy assumes that health services should be paid for, fees being determined by local medical personnel.

A Family Doctor Speaks.

TO THE EDITOR:

This is a true story. The setting: the coal area in West Virginia. The time was one o'clock in the morning. Chief character: a doctor investigating socialized practices, and on a salary paid by funds collected by a prepayment plan. His telephone awakened him. He had treated fifty people the previous day and was tired. The message was a sick call at a particular house. He dressed, went out, got his car and visited the patient. This was the conversation:

"What is the trouble?"

"That is why we sent for you—to tell us."

"What is the complaint—do you have a cold, cough, pain or what?"

"I have pain in the stomach," said the young woman, lying in bed.

"How long have you had the pain?" asked the physician.

"Only tonight, I went to the movies before seven o'clock, got home after twelve and went to bed."

The doctor took the temperature which was normal. Listened to the chest and heart—both were normal. Pressed over the abdomen and found no tenderness or soreness to explain the pain complained of.

"It did not require five hours to see the show, did it?" observed the medic.

"Oh, I saw it through twice," boasted the patient.

"You mean that you sat upon those hard folding-

chairs through two shows?" questioned the doctor.

"Yes" was the answer.

"If you were well enough to accomplish that feat why wake me up? You have no sickness that I can find."

"Well, that is why you are a doctor—to tell people if they are sick. That's what you are paid for."

"I am certainly not here to treat well people. Cases like yours are probably reasons why doctors come and go rather frequently here and might eventually prevent the medically minded from going into the profession at all."

Exit the doctor.

I know this is a true story because the writer was the medic.

This is not an isolated circumstance but such absurd and useless calls for medical service occurred many times every day. Prepayment plans such as insurance, cooperatives, payroll deductions to boards of trustees or Social (In-) Security all lend themselves to promote the irresponsibility and the lack of personal restraint and conservation on the part of the contributor.

The pool of funds belongs to no one. The more the patient seeks benefits the more he gets for his money. The contributor becomes a patient because he wants something back for something paid. A stipulated benefit or a certain allowance of units of care will result in more and more people consuming various allowances simply because they paid and not because they really had need of any benefit. The managers of the fund calculated the fee-cost on the basis of current rates established by people paying from their own pocket and not from a pool of funds which belongs to each one as much as anyone. Consequently, over-use results in periodic increases of fees, premiums, payroll deductions, or tax increases.

Fee for service means that the doctor can charge a fee for every house call, office call, and every other service for which the fund will pay a fee. Why should we restrain the patient from making ten visits when six would be sufficient to satisfy the patient's idea of adequate treatment if compensation is from the patient's pocket rather than a pool? No budget can stand it.

So what happens? The budget managers try to make the plan work by cutting fees, limiting services for particular cases, raising the rates more which creates more demands for what is allowed to the patient. Sooner or later the entire situation is out of the hands of both doctor and patient with the service entirely to the budget rather than to the patient.

This is the crux of the whole matter. Today we find the doctors literally "selling out" medicine. For once this socialization road is traveled *at all* there is no turning back. Another error is made to attempt the correction of the preceding one and the whole matter becomes bankrupt.

Doctors, of all people, should know human nature. Let's don't wake up to it too late. The art of medicine has edged over to make room for the science of medicine. Now both art and science are threatened with displacement by the business of medicine.

May I call attention to the words of Walter Pryll, general medical counsellor to the International Labor Office, speaking at a convention at Dresden in 1932: "The institutions of insurance which have the responsibility of distributing services to the insured and maintaining the financial balance of their budget should have the right to control the patient and the physician."

Robert E. Neff, President of the American Hospital Association, stated in July 1938: "Hospitals have a primary obligation to provide and organize all the services necessary for the diagnosis, treatment and rehabilitation of the patient."

At the International Conference of National Unions of Mutual Societies and Sickness Insurance Societies, in their fourth general assembly held at Dresden, October 19, 1930, the official position was stated: "It is not the insured patient but the insurance institution which supports the cost of medical treatment." Referring to the independent practicing physician as the "small exploitation" the statement says further, "As these small exploitations are by far the most numerous and as there is no reason to expect their abolition in the immediate future, it is necessary to secure the advantages of the great exploitation (meaning the insurances) while using the small. The strict enforcement of the rules of economical treatment which may be obtained by a serious control of the medical service is insisted on in order to get rid, at least in part, of the inconveniences of the small exploitation."

Physicians of Britain have endeavored repeatedly to convince the public that practice under insurance interferes with the giving of adequate time and attention to patients.

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The following figures show the per cent of total insured in England using services on average day, indicating the increase in the use of benefits of the physician:

1911—6%
1921—14%
1927—23%
1935—28%

The insured employee paid 9 shillings in 1911 and the same in 1935 but obtained service 4½ times as frequently.

The study and paper work imposed upon the physician of Britain is in itself a chore and time consuming.

The insurance practitioner receives from the insurance the following items to regulate his practice:

1. Prescription books.
2. Certificate books of 3 kinds.
3. The National Formulary.
4. The Medical Benefit Regulations.
5. The Drug Tariff.
6. Memorandum on Keeping Medical Records.
7. Memorandum on Pregnancy and Parturition of Insured Married Women.
8. Memorandum on Tuberculosis.
9. Memorandum on Medical Certification.
10. Memorandum on the Duties of the Regional Medical Staff.
11. Report on the Definition of Drugs for the Purpose of Medical Benefit.
12. Forms of Notification that treatment has been afforded to insured persons presenting traveller's vouchers.
13. Envelopes for the transmission of medical cards.
14. Envelopes for the transmission of forms of medical records.
15. Forms of application for medical cards.
16. Continuation cards for use in connection with medical records.
17. Specimens of nine other forms.
18. Four circular letters addressed to practitioners.
19. Requisition form for more stationery.

A special guide book finally was prepared to guide the practitioner in accomplishing this maze of paper work.

The German physician spent three months in special instruction in paper work and forms.

The British Medical Association has recently thrown in the sponge and abdicated to the Beveridge Plan.

Is there no other solution of the 300 billion government debt than the self destruction of the last entrepreneur—The American Family Doctor?

ERNEST L. SHORE, M.D.

Harrisonburg, Va., January 2, 1945.

Synthetic Male Sex Hormone by Mouth Relieves Premenstrual Distress.

Pointing out that about 40 per cent of normal women suffer a considerable amount of distress during their premenstrual period, S. Charles Freed, M.D., San Francisco, says in *The Journal of the American Medical Association* for February 17 that the administration by mouth of the synthetic male sex hormone, methyl testosterone, "is the surest and most convenient therapeutic [treatment] agent in this respect."

He says that "The disability of most of these women during this period is moderate and obviously affects chiefly their intimate social contacts. Nevertheless the subjective disturbances undoubtedly lead to inefficiency and a decrease in ability to concentrate. As the premenstrual distress averages about five days each month, it becomes apparent that there may be a huge economic loss when these relatively minor errors are summated. The disharmony in social relationships during the premenstrual period of suffering women is another factor of great importance. . . ."

Dr. Freed says that because relief of this condition is greatly beneficial from the standpoint of health, society and economics, more attention should be paid to it.

He explains that this distress can be relieved by a number of methods. Based on his studies he believes that "methyl testosterone administered once daily [by mouth] for from ten to seven days before the onset of menses is the surest and most convenient therapeutic agent for the relief of this condition."

XUM

CASE REPORT OF MATERNAL DEATH

MATERNAL HEALTH COMMITTEE
MEDICAL SOCIETY OF VIRGINIA

This patient (Case No. 241) was a white woman, 31 years old, para vi, who gave a history of five previous normal deliveries by a midwife. She had no prenatal care with this pregnancy, lived in an isolated area and, being attended by a midwife, went into labor two days before the physician was called. Labor was active and membranes ruptured during the second day. The cord prolapsed soon after the membranes ruptured. Morphine ½ gr. was given and patient sent to hospital.

On admission, she appeared to be acutely ill, complaining of severe pain in the upper abdomen. Temperature 97°, pulse 108, respiration 28. Pulse was irregular and poor quality. Transverse presentation was diagnosed.

One hour after admission, a stillborn infant was delivered by version and extraction. Chloroform anesthesia was used. Placenta was delivered spontaneously five minutes later. Pituitrin 1 cc. and coramin were injected. The shock was much worse after delivery and 1,000 cc. of 10 per cent glucose was given in the vein. This was followed by some improvement but pain in epigastrium was severe. Air hunger was treated by oxygen and another 1,000 cc. of glucose injected in the vein. Vomiting continued and a gastric lavage was given. Patient died three hours post partum.

This is classed as a preventable death. A transverse presentation if properly managed would not be expected to result in death. The death can be primarily charged to the absence of prenatal care and then to the midwife who allowed labor to progress without a diagnosis. Recognition of abnormal presentation before the beginning of labor is one of the most important uses of prenatal care. When the patient arrived at the hospital, she was then in shock. This should have been treated before any attempt to deliver. Morphine and atropine hypos followed by 10 per cent glucose in the vein would probably have been helpful. Plasma or blood transfusion would have been better. Apparently, she received 2,000 cc. glucose solution within a comparatively short time. This could be criticized as being excessive intravenous therapy.

Version and extraction hours or days after membranes ruptured exposed her to unusual risk of ruptured uterus which possibly occurred as she died three hours later after symptoms of severe hemorrhage. It is noted that the cervix was three fingers dilated and thick just before patient was admitted. As there was no presenting part or bag of waters to dilate cervix, it is probably that this condition persisted and contraindicated immediate extraction by any method. One member of the Committee expressed the opinion that after treatment of shock a Braxton Version would have been a suitable method, leaving extraction until dilatation occurred.

If the diagnosis had been made before labor an elective section would have given both mother and child excellent prospects of life and health.

Wyeth Incorporated Opens Baltimore Office.

Wyeth Incorporated, of Philadelphia, one of the largest ethical drug manufacturing houses in the country operating in the pharmaceutical, biological and nutritional fields, has opened a branch office and warehouse at 1125 West North Avenue, Baltimore, to handle distribution of Wyeth products throughout Maryland, Virginia, West Virginia and the District of Columbia. A complete line of Wyeth pharmaceuticals, biologicals and nutritionals, including vitamins, will be carried at the new Baltimore branch and service will be provided on a 24-hour day schedule.

This brings to 15 the number of sales offices and branch warehouses now being operated by Wyeth Incorporated throughout the United States.

XUM

THE COUNCIL
MEDICAL SOCIETY OF VIRGINIA

The Council of the Medical Society of Virginia met at the Society's office in Richmond on February 1, 1945, with Dr. H. B. Mulholland, president, presiding. Others attending were: Dr. Julian L. Rawls, president-elect; Dr. H. B. Haag, vice-president; Drs. C. L. Harrell, Wm. B. Porter, J. L. Hamner, W. C. Akers, J. R. Gorman, A. F. Robertson, Jr., J. E. Knight, and F. H. Smith, councilors from the 2nd to the 9th Districts, inclusive; Dr. I. C. Riggin, State Health Commissioner; and Dr. M. Pierce Rucker, editor of the MONTHLY.

It was moved that the reading of the minutes of the October meeting of the Council be dispensed with and that they be accepted as printed in the December 1944 MONTHLY, pages 637 and 638.

Dr. Mulholland then appointed Drs. Porter and Akers as the budget committee of the Council.

In response to inquiry from the secretary, it was decided to buy one or more bonds in the next War Loan drive, this to be decided by the Budget Committee in accordance with the balance in the treasury at that time.

As Dr. Emmett, chairman of the Committee on Public Relations and Medical Service, could not be present, Dr. Mulholland said there had not been a meeting of the Committee for some time. The members have received a great deal of literature in regard to problems which have come up for discussion but at this time there seems nothing particular to add to what has been previously reported. He, Dr. Riggin and Dr. Rucker attended a regional conference in Washington, recently, to secure what information they could from the discussions, and he assured the doctors that the Committee will try to keep in touch with any developments.

Dr. Mulholland told of having received a letter from the Roanoke Academy of Medicine with respect to the license tax which the Council of that city proposed to impose upon physicians and other professional groups. He referred this to Mr. R. C. Duval, attorney for the Society, who had written an opinion to the Roanoke doctors.

He also told of a letter received from the Creative Arts Studio of Washington, asking permission to use photographs of a member of this Society in making a picture story on the "Country Doctor" for educational purposes, to be shown overseas and also in this country. He had advised that he felt there would be no objection to using it in an impersonal way, provided the doctor's name is not used. This decision was approved.

The next matter for discussion was a letter from Mr. Randolph Bruce, Jr., working under the War Manpower Commisison, with regard to "Selective Placement for the Handicapped". The Commission wished the approval of their program by the Society so there might be no delay when individual doctors were contacted by the personnel of local offices with regard to completing Physical Capacities Appraisal Forms. It was not contemplated there would be much of this work as it would occur only when a physically handicapped individual went to the United States Employment Service office in search of a job, as information with regard to veterans could be obtained from other sources than the family physician. Dr. Mulholland stated that the Committee on Public Relations and Medical Service and Dr. Porter, chairman of the Rehabilitation Committee, had looked into the matter quite thoroughly and they felt it should be approved as it was attempting to place physically handicapped people in jobs where they are best suited. To a question as to the fee schedule, Dr. Mulholland said he thought it probable that no fee would be paid by the Government. These people are, for the most part, unable to pay, but, wherever possible, they should pay the usual fee for such services. Motion was made that the Council approve the program in principle and that the physician should set his fee if the individual is able to pay; otherwise the service should be free. This was seconded and carried.

Major Eliot V. Graves,* supervisor of Physical and Health Education for the State, had written the President of the program that the State Department of Education is promoting in a limited number of counties on an experimental basis, with the hope of making it a state-wide plan. One of the National Foundations is giving financial assistance in promotion of the work. The general plan, as outlined in a letter to the President by Major Graves, was to concentrate on three major objectives of community life: 1. School; 2. Health Services; and 3. Community Organizations. Discussion brought out the fact that the work had already been undertaken in Bedford and Charlotte Counties and that it had not worked out according to this plan. Dr. Gorman stated that the Lynchburg doctors had been consulted with reference to the project but that apparently physicians took no part in the examination of these school children. After having been picked out by the non-medical individuals concerned with the operation of the plan, they were then to be sent to ear, nose and throat specialists, alphabetically, for their tonsil operations. They were not allowed to select a physician of their choice. It was further stated that the project had not been coordinated with the activities of the State Health Department. In the practical operation of the plan, Dr. Gorman stated that he was absolutely opposed to it as it was being carried out. Following the discussion, motion was made that the Council

1. Approves the principle of health education in state schools;

2. Disapproves equally all other aspects of this project as carried out in the experimental counties;

3. Approves the examination of school children by competent physicians and the correction of remediable defects, and, further;

4. Is of the opinion that such a project as has been

*After being advised of action of the Council, Major Graves wrote Dr. Mulholland an explanatory statement which appears on page 130.

proposed and carried on should be supervised by the State Health Department.

This was seconded and carried.

Dr. L. Howard Shriver, president of the Ohio State Medical Association, had sent resolutions adopted by its Council with regard to the Ohio River Valley Water Sanitation Compact, and asked the Medical Society of Virginia to lend its support to this measure. It was the opinion of the Council that this applied equally to all waterways in Virginia, and it was moved and carried that this body approve in principle the resolutions of the Ohio State Medical Association in regard to anti-pollution of all waterways in the United States.

Recess was then taken for lunch, following which Dr. Mulholland read a letter from Dr. A. L. Miller, member of Congress from Nebraska, with regard to Bill HR-1391, which he is presenting in Congress, "To establish a Department of National Health", providing for a secretary of Cabinet rank as its head. He stated that there are some thirty-two federal agencies dealing with various phases of health, and he felt that a Secretary of National Health might consolidate these activities and eliminate some of the overlapping ones. Dr. Mulholland thought the idea good but saw nothing in it to provide that the secretary of such a department should be a doctor of medicine. Dr. Riggin said the American Medical Association had gone on record as approving such a department. Motion was made by Dr. Porter, seconded and carried, that this body favors the establishment of a Department of National Health with a secretary who is a doctor of medicine, further, that copies of this resolution be sent the senators and congressmen from Virginia, and Congressman Miller.

A letter was next read from Miss Gwen McWhorter, Health Education Director with the Virginia Tuberculosis Association, submitting a plan which she had discussed with Dr. Mulholland, proposing a Health Coordinating Committee for the State. This suggestion was based on the fact that there are a number of agencies in the State concerned with health and, though each has its own special aspects, all are more or less related. It was suggested that a Health Coordinating Committee should be composed of one member from each health agency in the State, official and non-official; that it should have no administrative authority; and that its chief purpose should be to unify the attack on health problems in Virginia. It might also serve as an advisory board with which the various agencies might discuss any contemplated health program. She and officers of the Association felt the Medical Society of Virginia would seem the appropriate group to take the initiative in such a movement. After discussion, the Council by motion approved this as an excellent idea but suggested that instead of setting up another agency the various associations adopt the State Health Department as the governing agency with one member from each organization forming the committee. This was seconded and adopted.

Dr. Harrell asked if anything had been done about the discussion in the last meeting of the House of Delegates with regard to vacant beds at the State Tuberculosis sanatoria. It was noted that this was referred back to the Tuberculosis Committee for their recommendation which should be made to the Council, with the Council to have authority to take up the matter with the Governor, Legislature, or do what they thought best. Dr. Riggin said it is not a question of money but that the State laws would not allow an increase of wages, and it was impossible to get sufficient help on account of the higher wages offered in war industries, and that this matter could not even "get to first base" without going through the General Assembly. It was the opinion of members that this should be deferred to the next meeting of the Council.

A subject of importance was the decision as to holding a meeting of the Society this year, as the Office of Defense Transportation had ruled that organizations planning to hold conventions, to be attended by more than fifty persons, after the first of February of this year will have to show how the war effort will suffer if the meetings are not held. After discussion, it was left to the President to decide, about the first of May, whether, if circumstances permit, permission will be asked (1) to hold the State meeting, or (2) to hold a meeting of the House of Delegates, or (3) to simply hold a meeting of the Council. It was suggested that there might be one delegate from each component society but Dr. Smith felt this might not be legal as the Constitution specifically stated that the Council shall have charge of business affairs of the Society when the House of Delegates is not in session, and one member from each component society would not legally form a House of Delegates. Dr. John O. Boyd, general chairman for the Roanoke meeting, had suggested the week of October 21st as a good time for the meeting, so it was decided to ask him to see that provisional reservation is made for this date until the first of May for at least the Council meeting.

The American Association of Physicians and Surgeons with headquarters in Gary, Indiana, has recently been seeking approval of physicians, although it has not been approved by the American Medical Association, and has no connection with the National Physicians Committee which was endorsed by the House of Delegates of this Society at its last meeting. Motion was adopted that the Council go on record as opposing the policy of the American Association of Physicians and Surgeons and any other organization with similar constitution and by-laws.

Dr. Smith stated that it often happens that doctors do not read the MONTHLY as promptly as they might and suggested that a letter or card be sent each member, calling attention to the Council proceedings when published. This was approved.

The President and others felt there were several sections of the By-Laws of the Society which should be amended and Dr. Mulholland agreed to bring these to the attention of the Judicial Committee.

There being no further business, the meeting adjourned.

Approved: AGNES V. EDWARDS,
H. B. MULHOLLAND, *Secretary.*
President.
February 12, 1945.

PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for January 1945, compared with the same month in 1944, follows:

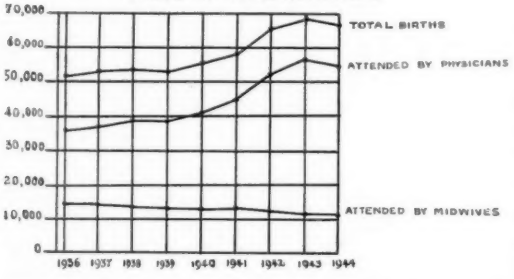
	January 1945	*January 1944*
Typhoid and Paratyphoid Fever	4	5
Diarrhea and Dysentery	242	119
Measles	60	990
Scarlet Fever	359	206
Diphtheria	26	23
Poliomyelitis	4	1
Meningitis	24	68
Undulant Fever	3	4
Rocky Mountain Spotted Fever	0	0
Tularemia	2	7

BIRTH BY ATTENDANCE AT DELIVERY

It is very interesting to note that attendance at delivery by physicians has increased steadily with a corresponding decreased attendance by midwives or others. This fact applies to both the white and colored groups. From preliminary compilations, there were 65,500 births in Virginia in 1944, with a provisional rate of 23.0 per 1,000 population. Physicians were in attendance at 54,365 or 83 per cent of the deliveries; midwives attended 11,135 or 17 per cent, according to provisional figures.

The marked increase in physician deliveries and decrease in those by midwives is significantly established by a comparison of the 1920 and 1944 figures—1920 being the first year in which figures by attendant were available. In 1920 physicians were in attendance at 63.4 per cent of *all* births, and midwives at 35.3 per cent. In 1944 the ratio of

STATE OF VIRGINIA BIRTHS

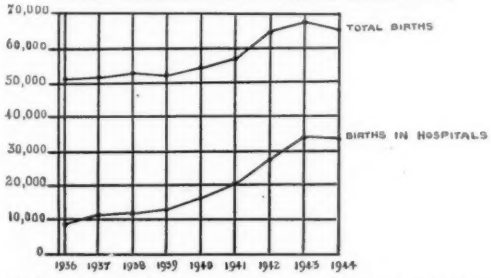


physician deliveries reached 83 per cent or a gain of 31 per cent, while the midwife deliveries and those by others reached an all-time low of 17 per cent or a decrease of 52 per cent.

The increase in births occurring in hospitals also is an exceedingly significant trend. While a reasonably larger number of hospital deliveries would be expected as a complement to the increase in physician deliveries, the increase in such deliveries (226 per cent) in 1943 over 1935 (the first year in which data was available for hospital deliveries) is highly gratifying. Provisional figures indicate an even greater increase for 1944.

That a rural problem in this connection still presents itself, however, is indicated by the fact that but 37.2 per cent of women in rural communities were delivered in hospitals in 1943 as against 75.1 per cent of those residing in urban districts. In urban localities 21,999 women had physicians in attendance, representing 90.7 per cent of the urban

STATE OF VIRGINIA
TOTAL BIRTHS AND HOSPITAL DELIVERIES



total, with 2,246 or 9.3 per cent having midwives. Estimates for the year 1944 show comparable ratios. These figures are even more significant when it is realized that the population of Virginia at the U. S. census of 1940 was: urban 35.3 per cent; rural 64.7 per cent.

Undoubtedly, the economic advancement of both white and colored groups in the most recent years has been partly responsible for the increase in physician attendance and a corresponding decrease in that of midwives, to which fact the greater supervision and higher requirements of midwives must be added. Health education, through State, county and municipal clinics, plus the personal professional influence of the family physician for hospitalization, the development of prepaid hospitalization through insurance plans such as the Blue Cross, and the ability of physicians to give more efficient care in

the hospital rather than in the home, also have been most important factors.

There is every reason to believe that, with the postwar extension of health facilities in rural areas, a more general acceptance of various hospital insurance plans, and the continued enthusiasm of the medical profession for deliveries in hospitals, the present trends both in physician attendance and hospital deliveries will steadily and markedly increase.

NEW MEMBERS

New members of the Medical Society of Virginia, since the list published in the February 1944 issue of the MONTHLY, are:

Dr. Joseph Long Alexander, Staunton.
Dr. Harry Lee Archer, Charlottesville.
Dr. Ernest Lynwood Bagby, Richmond.
Dr. Glenn H. Baird, Abingdon.
Dr. Wallace Edgar Baker, Richmond.
Dr. Bruno Barelare, Jr., Charlottesville.
Dr. Frederick William Barger, Salem.
Dr. Joseph Michael Barker, Arlington.
Dr. John Morgan Biedler, Harrisonburg.
Dr. William Nicholas Botts, Appalachia.
Dr. William Walker Butzner, Jr., Fredericksburg.
Dr. Carlton Jerome Case, Charlottesville.
Dr. Matilda Daugherty Chalkley, Richmond.
Dr. Peyton Moncure Chichester, Abingdon.
Dr. Hugh Wilfred Clement, Toms Creek.
Dr. Elizabeth Mickley Cover, Luray.
Dr. Robert Humber Cox, Jr., Lynchburg.
Dr. August Reynolds Crane, Norfolk.
Dr. Galen Glick Craun, Richmond.
Dr. Edgar Lee Crumpacker, Williamsburg.
Dr. Garrett Dalton, Radford.
Dr. Dexter Davis, Roanoke.
Dr. William Cole Davis, Lexington.
Dr. Hermann Diamant, Farnham.
Dr. Murray Dick, Newport News.
Dr. Thomas Henry Dickerson, Martinsville.
Dr. Malcolm Peel Dillard, Roanoke.
Dr. James F. Edmonds, Accomac.
Dr. Walter A. Eskridge, Richmond.
Dr. James Armstead Fields, Dahlgren.
Dr. Percy Ryland Fox, Richmond.
Dr. Andrew Frederick Giesen, Radford.
Dr. Conrad Louis Gossels, Mt. Jackson.
Dr. Isa Costen Grant, Franklin.
Dr. George Smith Grier, III, Newport News.
Dr. DuPont Guerry, III, Richmond.
Dr. Lewis Clay Haley, Axton.
Dr. John Hampton Hare, Warsaw.
Dr. Lucy Scott Hill, Madison.
Dr. Paul Swanson Hill, Harrisonburg.
Dr. Erwin Leopold Hirsley, Jewell Valley.
Dr. Robert Carhart Hood, Arlington.
Dr. Joseph David Hough, Franklin.
Dr. Lawrence Alexander Jacklin, Falls Church.
Dr. Wycliffe Charles Jackson, Amonate.
Dr. Frederick Matthes Jacobs, Roanoke.
Dr. John Randolph Kight, Norfolk.
Dr. George Henry Kinser, Waynesboro.
*Dr. Edward W. Kunckle, Richmond.
Dr. Claude Marshall Lee, Charlottesville.
Dr. Randolph Leigh, Jr., Charlottesville.
Dr. Hans Lent, Draper.
Dr. Juan Martinez-Galindo, Charlottesville.
Dr. Verlin Estelle Miles, Arlington.
Dr. Dorothy Diehl Moore, Petersburg.
Dr. James Keith Morrow, Radford.
Dr. Hugh Page Newbill, Charlottesville.
Dr. Charles Thomas Nicholson, Jr., Alexandria.
*Dr. Carney Cooper Pearce, Jr., Charlottesville.
Dr. Paul Chester Pearson, Aylett.
Dr. Fred R. Person, Roanoke.
Dr. James Guy Price, Charlottesville.
Dr. Edward S. Ray, Richmond.
Dr. Duvahl Boone Ridgway, Roanoke.
Dr. William Mayer Robinson, Richmond.
Dr. Albert John Russo, Salem.
Dr. William Callier Salley, Norfolk.
Dr. Ulvert Ottway Sanders, Grundy.
Dr. Samuel Gilmore Saunders, Waynesboro.
Dr. Ernst Schweiger, Portsmouth.
Dr. Robert James Scott, Onancock.
Dr. Stuart Wray Selden, Kents Store.
Dr. E. L. Sikes, Pound.
Dr. Herman Ivan Slate, Arlington.
Dr. Catherine W. R. Smith, Abingdon.
Dr. Harry LeCato Smith, Jr., Charlottesville.
Dr. Hartwell Graham Stoneham, Waverly.
Dr. John Brendan Sullivan, Arlington.
Dr. John Warrick Thomas, Richmond.
Dr. John T. Thornton, Charlottesville.
Dr. John Randolph Travis, Fredericksburg.
Dr. Edward Holland Trower, Eastville.
Dr. John Alden Vann, Charlottesville.
Dr. Leo Carl Varden, Arlington.
Dr. Elmar Stebbins Waring, Fairfax.
Dr. Nancy Safford Whitticar, Fredericksburg.
Dr. John Franklin Williams, Richmond.
Dr. William Christopher Williams, Hillsville.
Dr. Patrick Henry Winston, Clarksville.
Dr. John Alexander Wright, Jr., Doswell.

*Moved from Virginia and resigned.

XUM

WOMAN'S AUXILIARY
to the
MEDICAL SOCIETY OF VIRGINIA

President—MRS. PAUL C. PEARSON, Aylett
President-Elect—MRS. P. M. CHICHESTER, Abingdon
Recording Secretary—MRS. C. C. SMITH, Norfolk
Corresponding Secretary—MRS. HAWES CAMPBELL, Turpin
Treasurer—MRS. REUBEN F. SIMMS, Richmond
Chairman, Press and Publicity—MRS. A. G. SHETTER, Richmond.

Woman's Auxiliary to the Medical Society of Virginia.

The mid-winter meeting of the Board was held in Richmond on January 31, with Mrs. Paul Pearson of Aylett presiding. There were twelve members present and these represented six auxiliaries. Mrs. Southgate Leigh, Jr., acted as secretary in the absence of Mrs. C. C. Smith.

Reports were presented from the officers and various committees. The attendance trophy was presented to the Accomac-Northampton Auxiliary, the presentation being made by Mrs. Hawes Campbell to Mrs. J. L. DeCormis for the Auxiliary. This award is based on the percentage of members present at all meetings, which was 67.7 per cent during the year 1943-4. Attention was called to the fact that this Auxiliary has received the trophy twice previously, though the membership is composed of members living in a seventy-five mile area.

Motion was adopted that the annual meeting scheduled for Roanoke in October 1945 be canceled, subject to approval of the Advisory Council. This was done in view of the request from the National Office of Defense Transportation that no convention be held by organizations whose attendance is expected to exceed fifty.

The president appointed the Nominating Committee as follows: Mrs. W. Clyde West, chairman, Mrs. William Lett Harris, Mrs. E. Latane Flanagan, and Mrs. J. L. DeCormis.

LOUDOUN-FAUQUIER AUXILIARY

Mrs. D. T. Saffer, secretary of this Auxiliary, reports that due to the gas shortage and distances involved, they have had to discontinue meetings for the duration. However, they are paying State and National dues and Maintenance Fund. All members are very active in defense work in their respective communities. Their president, Mrs. Stewart McBryde, is a Gray Lady, and is connected with the hospital at Fort Belvoir, where she finds the work most interesting.

RICHMOND AUXILIARY

Twenty-four members of the Woman's Auxiliary to the Richmond Academy of Medicine enjoyed a delicious luncheon and Christmas party on December 15 at the Academy Building.

At the regular monthly meeting held January 18, the Auxiliary voted to contribute $10.00 to the "March of Dimes" drive, $5.00 to the State maintenance fund and $36.50 to the Leigh-Hodges-Wright Memorial Fund.

The guest speaker for this meeting was a local artist, Miss Willoughby Ions, who spoke informally on designing toys for children and on creating expressions on toys. She showed samples of her toys and of her china and tapestry paintings.

The meeting was enjoyed by twenty members and one visitor.

EVELYN ROWE, *Recording Secretary.*

NORFOLK AUXILIARY

Since the December meeting and report, the activities of the Auxiliary have been as follows:

A Supper Party at the Norfolk Yacht and Country Club, January 10, for the members of the Norfolk County Medical Society, their wives and Medical Officers in the Armed Forces stationed there with their wives. Slightly more than a hundred attended, among whom were twenty-four of the above-mentioned guests.

The Public Relations meeting of the Auxiliary was held February 7, the president, Mrs. Southgate Leigh, Jr., presiding.

There were present nineteen members, fourteen representatives of women's civic organizations, and wives of five Service Medical Officers.

The Health Education chairman reported that she had received from the A.M.A., and distributed posters among the city schools, announcing the radio programs which are to be sponsored by the A.M.A.

The secretary read a letter from Mrs. Wright, chairman of the Leigh-Hodges-Wright Memorial Bed fund, thanking the Auxiliary for its contribution.

Mrs. Charles Lupton, chairman of a special com-

mittee, announced that she had sent Christmas greetings to the Norfolk County Medical Society members who are in the Armed Forces and had received an answer from one.

The president reported that she had attended the State Board meeting in Richmond, January 31, as well as a recent meeting of the Tidewater Camp and Hospital Association.

A letter was read from Mrs. Paul Pearson, State President, accepting an invitation to attend a luncheon meeting of the Auxiliary on April 9. At this time Doctors' Day will be observed and the Health Education chairman will present Dr. Harrell, a Norfolk author, who has done research in nutrition.

In the absence of the Public Relations chairman, Mrs. Brock Jones, Mrs. R. Bryan Grinnan, Jr., introduced the speaker of the occasion, Lt. (jg) E. M. Vail, Hospital Corps, U.S.N., now stationed at the Naval Operating Base Hospital in Norfolk. She spoke on the part Physiotherapy is playing in the Rehabilitation of Service Men.

At the conclusion of the lecture, tea was served by the Social Committee. Mrs. Millard B. Savage is chairman of this committee and acted as hostess.

BOOK ANNOUNCEMENTS

Books received are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

The Marihuana Problem in the City of New York. Sociological, Medical, Psychological and Pharmacological Studies. By the Mayor's Committee on Marihuana. The Jaques Cattell Press, Lancaster, Pennsylvania. 1944. xii-220 pages. Cloth. Price $2.50.

The Abortion Problem. Proceedings of the Conference Held under the Auspices of the National Committee on Maternal Health, Inc., at the New York Academy of Medicine, June 19th and 20th, 1942. Howard C. Taylor, Jr., M.D., Conference Chairman. The Williams and Wilkins Company, Baltimore. 1944. xii-182 pages. Cloth.

The Avitaminoses. The Chemical, Clinical and Pathological Aspects of the Vitamin Deficiency Diseases. By WALTER H. EDDY, Ph.D., Emeritus Professor of Physiological Chemistry, Teachers College, Columbia University; and GILBERT DALLDORF, M.D., Pathologist of the Grasslands and Northern Westchester Hospitals, New York. Third Edition. Baltimore. The Williams and Wilkins Company. 1944. xi-438 pages. Cloth. Price $4.50.

This book is an excellent and timely review of the vitamins, including their chemistry, functions, pathology of deficiencies, and methods of assay. The material is well arranged, easy to read, and up-to-date. Differentiation between animal and human effects are clearly made. It can be recommended to physicians as a specific antidote to both the emetic radio advertising of vitamin products, and the equally extreme nihilism arising therefrom.

However, just to prove that even these eminent authors have not written The Perfect Book, page 119 states that "Natural foods contain little or none of this vitamin" (D). This is incorrect. Such natural foods as salmon, fish and mammalian livers, and at times, eggs, do contain important amounts. Unfortunately, such foods do not form an appreciable part of the average diet.

R. J. M.

Endocrinology of Woman. By E. C. HAMBLEN, B.S., M.D., F.A.C.S., Clinical Professor of Endocrinology and Associate Professor of Obstetrics and Gynecology, Duke University School of Medicine; Chief of the Endocrine Division and Endocrinologist, Duke Hospital, Durham, N. C. Charles C. Thomas. Springfield, Illinois. 1945. xii-571 pages. Illustrated. Cloth. Price $8.00.

Part I describes the history, embryology, anomalies, anatomy, histology, secretory control, chemistry, physiology, and interrelations of the various endocrine glands. It is written in typical textbook fashion, but since it is fairly short, 88 pages, will be more readable to the medical student or the older doctor who feels in need of catching up, than the average textbook.

Part II deals with endocrine physiology at various stages of life.

Part III discusses clinical and laboratory methods. It is very complete, clear and concise.

Part IV deals with diseases of function of endocrine glands. There are a number of excellent pictures and adequate references which are all in English.

Part V discusses treatment of functional disorders and diseases of gynecological and obstetrical significance. The bitter antipathy to the use of androgens in the female is frequently stressed, as is also the avoidance of the use of unnecessary estrogens during and after the normal menopause. The clear explanation of therapy used, and the wide background of experience represented make the book a useful one for any doctor who treats women patients.

M. P. R.

XUM

VIRGINIA MEDICAL MONTHLY

Official Publication of the Medical Society of Virginia

(Founded by Landon B. Edwards, M. D., April, 1874)

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VOL. 72 MARCH, 1945 No. 3

The Canceling of Medical Meetings

WE question neither the authority nor the wisdom of the O. D. T. in canceling all meetings* of more than 50 persons, or ones involving an overnight stay of those in attendance. Winning the war and winning it quickly is the most important thing for Americans at this moment. Everything necessary to attain that end, should be submitted to cheerfully. On the other hand, one should not lose sight of the fact that never before have medical meetings been so important. The health of the people is in the hands of a profession whose numbers have been reduced one-third. This means that each doctor must be as efficient as possible. In addition, new and potent remedies and technics are becoming available as never before. These are given wide publicity in *Time*, and *The Readers Digest*, etc., which over-emphasize the good, and say nothing of the bad effects. The indications, as well as the contraindications, must be learned, or the public will suffer. Drugs that are as powerful as the sulfa drugs and penicillin are capable of doing great harm when improperly used. In a recent journal there is a report of a near catastrophe from injecting penicillin into the cerebral venticle. We must learn and learn fast what is of good repute. Medical journals are useful, but nothing takes the place of personal contact in the discussions of new problems. For instance, the journals have been full of the new pressure treatment of burns. A well-trained doctor in another city tried it with a plaster cast on the leg and foot, including the toes. Pressure gangrene resulted and the patient lost his leg. This would not have occurred had the doctor learned the technic from seeing instead of reading.

"Finally brethren: Whatsoever things are true; whatsoever things are honest; whatsoever things are just; whatsoever things are lovely; whatsoever things are of good report; if there be any virtue and if there be any praise, think on these things."

Medical Aspects of Compulsory Military Training

A YEAR'S training in patriotism conducted by the Army or the Navy may be beneficial to our country in ways other than national defense. There was a time, not so many years ago, when the bringing together of great numbers of people was not

*While this editorial was in the hands of the printer (February 13th) word came over the radio that between 800 and 900 members of the A. F. of L. were attending a meeting in Miami, Fla.

without danger. Until the present century, armies had more reason to fear disease than the enemy. This is no longer so. The "camp diseases", typhoid fever, typhus fever, and the dysenteries have been conquered. Modern sanitation and immunology have made army camps as safe as health resorts. So we may check off health hazards as an argument against compulsory military training.

What are the benefits that may be expected? In the first place, there will be a complete physical examination of each trainee as he reaches the age for training, something that is worthwhile in itself. There should be no rejectees in this examination, but rather a classification. The remedial defects would of course be corrected. Those with physical defects that cannot be corrected could be put in special camps suitable to their condition, just as backward children in the public schools are put in special classes. During the period of training, health education could be taught in a very practical manner. At the end of the course the graduates would have a better idea of the value of a balanced diet, to mention only one item. They certainly would make a better showing physically than the freshman in college made before the war.

From a medical point of view there can be only one argument against compulsory medical training. Already the medical student, and presumedly the same applies to other branches of technical training, reaches the period of usefulness to the public too late in life. Unless some steps are taken to telescope some of the necessary pre-technical training into the year of military training, the plan will make the doctor (or engineer) one year older when he begins practice.

Whether the training should be extended to girls is more debatable. All changes that modern civilization has inflicted upon women have had a tendency to minimize the influence of home. If girls are to be included, we hope that domestic science will have a prominent place in the curriculum.

Michael Underwood and the First Description of Infantile Paralysis

A RECENT request directed to the Richmond Academy of Medicine by Dr. Ludwig Hektoen, for a photostat of the first description of antero-poliomyelitis, which is reputed to be found in the first edition of Underwood's "A Treatise on the Diseases of Children", brought to light several interesting facts: First, that the earliest description of this disease is to be found in the second edition, and not in the first edition as is commonly believed; Second, that the first edition is an extremely rare book. Evidently it was not available to Garrison when he wrote his *History of Pediatrics* for he erroneously stated (p. 78) that the 1784 edition contains the first description of poliomyelitis. The only copy of the 1784 edition listed in the Union Catalogue of the Library of Congress is that belonging to the Richmond Academy of Medicine. The Army Medical Library and several other libraries have copies of the second (1789) edition. The earliest edition in the collections of the Library of Congress is that which was published in Philadelphia in 1793.

The first edition is a little book of 288 pages, 16½ by 9¾ cm. Its title page reads: A/ Treatise/ on/ The Diseases of Children,/ With Directions/ For the Management of Infants/ From the Birth;/ Especially/ Such as are brought up *by hand.*/ By Michael Underwood, M.D.,/ Licentiate in Midwifery/ of the/ Royal College of Physicians, in London,/ and/ Practitioner at the British Lying-In/ Hospital./ *Ornari Res ipsa negat, contenta doceri.* Hor./ London,/ Printed for J. Mathews, No. 18, Strand./ MDCCLXXXIV. Inscribed on the fly-leaf is "Sir John Elliott, Bart. With author's best Respects."

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Dr. Hektoen sent us a typescript of the description of the disease from the second edition. There is nothing in the table of contents of the first edition that corresponds to this account and we went over the first edition page by page and found no such description. We are forced therefore to conclude that the description that occurs in the second (1789) edition is the earliest description of the disease. It was a comfort to find that the late Dr. John Rühran (*Am. J. Dis. Child.* **40**:1312,1930) came to the same conclusion.

Michael Underwood, 1736-1820, man-midwife, was born in Surrey. He studied at St. George's Hospital under Sir Caesar Hawkins and also saw something of the practice of John Freke. He studied for some time in Paris, and practiced for some years in Great Marlboro Street, London, where eventually he limited his practice to women and children. On April 5, 1784 he was admitted a licentiate in midwifery of the College of Physicians of London, and was the last survivor to bear the title, man-midwife. He was attached to the British Lying-In Hospital and attended the Princess of Wales at the birth of the Princess Charlotte. His treatise on the diseases of children was the best on that subject which had appeared in English. (D.N.B.)

That an obstetrician should write the best book on pediatrics seems strange to us today. However the combining of the two branches was common in England and this country in the eighteenth century. The teaching of obstetrics in our medical schools was always combined with some other branch. Thus the first professor of obstetrics in the United States was also the professor of anatomy. Dewees, the first American to write a System of Midwifery, also wrote a book on the diseases of children. Interestingly enough, Samuel Merriman, the great London obstetrician, edited and revised the 8th edition of Underwood's treatise on diseases of children.

It is natural that this combination should have begun in England, where the men-midwives and obstetricians have always been medically minded. In France on the other hand and in Germany, the surgical side of obstetrics was developed. It is true that the obstetrical forceps was invented in England, but it was done by a Frenchman. Paré re-introduced podalic version, and Sigault devised and performed the operation of symphysiotomy in France. In 1580 Rousset published a book on Cesarean section and reported fifteen cases. In the meantime in England William Harvey wrote a monumental work on embryology and 1774 William Hunter published his beautiful atlas on the human gravid uterus, while Charles White, Thomas Denman, John Clarke, and Alexander Gordon were making studies which Oliver Wendell Holmes later used so effectively to prove the contagiousness of puerperal fever.

Not all of Underwood's published work had to do with diseases of children. His "treatise upon ulcers of the legs; in which former methods of treatment are candidly examined and compared with one more rational and safe, proving that a perfect cure may generally be effected more certainly, without rest and confinement, than by the strict regimen in common use; with an introduction on the process of ulceration and the origen of pus laudabile. To which are added hints on a successful method of treating some scrophulous tumors, and the mammary abscess and sore nipples of lying-in women," appeared in 1783. This went through a number of editions and was translated into French and German. Of his treatise on the diseases of children the Catalogue of the Surgeon-General's Library lists some 16 or 17 editions: London 1789, London 1797, London 1799, London 1805, London 1819, London 1827, Philadelphia 1793, Boston 1806, Philadelphia 1818, Philadelphia 1841, Paris 1786, Paris and Montpellier 1823, Leipzig 1848, Philadelphia 1802, and London 1835.

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New York Medicine

WE are glad to welcome among our exchanges a new journal. Number one of Volume one of *New York Medicine,* the official publication of the Medical Society of the County, bears the date of January 5, 1945. In this day of manpower and paper shortage the appearance of a new magazine is an event. *New York Medicine* proposes to devote itself to promoting an understanding and tolerance towards the medical profession on the part of the public by making known the views, the needs and the philosophy of the physician. More specifically, it will summarize the major developments of scientific progress, report briefly and engagingly the developing viewpoints registered by the medical profession, record the important activities and accomplishments of the Medical Society of the County of New York, and provide a forum for the views and contributions of members and friends of the Society. If *"New York Medicine"* lives up to its program, it will justify its existence.

Half-Truths

WE live in an age of propaganda and pressure groups and are subjected to a constant barrage of half-truths. Some are so obvious that they are merely amusing, but some are so nearly true that they are particularly annoying. For instance, we are told that cancer is a curable disease if it is seen early. Yet statistics show a constantly increasing cancer mortality until now it is a top ranking cause of death. A natural inference is that either the doctors are negligent or that there are too few of them. The proponents of Federal control of medicine use this as an argument for their plans. They hold that if good medical care were available to all the people, there would be no cancer deaths. Yet the chief surgeon of a great clinic died not so long ago of cancer of the stomach. Was this due to unavailability of diagnostic resources or surgical skill? An operating room supervisor developed a hopeless breast cancer. Was this because she could not get the best care? A leading cancer expert treated a college president for years for some intestinal trouble. Nevertheless, the college president died of unrecognized cancer of the liver. Was this because he lacked the means or the intelligence to seek treatment early? You might say that these are isolated cases and do not count, but they represent over 20 per cent of the cancers the editor has known about in the past few years.

Another half-truth that has wide credence, concerns fetal mortality in Cesarean section. Because a section is frequently done to save fetal life, the public and many doctors have the impression that there should be no fetal mortality incident to Cesarean section. Any statistical study will show the error of such a belief. In fact, the fetal mortality in section is, in round numbers, some 5 per cent, and one-third of this is difficult to explain.

We teach that eclampsia is a preventable disease and that a patient does not have it, if she has adequate care. Yet many of us have seen fulminating eclampsia when there have been no prodromal signs or symptoms, and when the patient has had good prenatal care. When such a case occurs, what does the public think of the doctor?

Two and two do not always make four in medical calculations. The late Dr. Whitridge Williams, when president of the American Association for the Prevention of Infantile Mortality, presented a study of neo-natal deaths. In 10,000 consecutive births at Johns Hopkins there were 705 infant deaths. The largest single cause of death was syphilis, which was responsible for 26 per cent. This was in 1915 when the Wassermann test was just being introduced. In fact, he stated that it was too expensive to use routinely on pregnant women when there was no suspicion of syphilis.

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Nevertheless he instituted an intensive study to eradicate syphilis in expectant mothers. Five years later, in 1920, he again reported on the subject. Since his first report there had been 4,000 births with 302 neo-natal deaths (7.5 per cent) and 34 per cent of them were due to syphilis. The work was continued, and later when syphilis had been practically eliminated as a cause of infant death, the neo-natal mortality remained higher than one would expect from deducting the one-third that had been due to syphilis.

PRESIDENT'S MESSAGE

THE Council held its mid-winter meeting in Richmond last month, the minutes of which may be found on pages 134-135. Due to the importance and general interest of many of the topics discussed, I think it advisable to emphasize and elaborate on several of these.

Aid to physically handicapped individuals in the general population, in order that they may secure employment in positions commensurate with their ability, is one of the projects of the War Manpower Commission and the United States Employment Service. This branch of the Government has asked that physicians cooperate with them in evaluating the physical status of these applicants. As a humanitarian contribution to the general welfare, it was felt that we should perform this service. It is anticipated that only a few will seek this examination, and an effort will be made to obtain a more simplified form for such examinations than the one now used by the Government.

Co-incident with improvement in our educational system in the State, health education in the public schools should also be strengthened and the Society wishes to cooperate in the betterment of this phase of school life. However, as indicated in the minutes, it is felt that the effort should be a co-ordinated one with the State Department of Health, and that any correlated examinations and operations should follow established practices.

An excellent suggestion has been made with reference to a co-ordinating committee composed of representatives of the various organizations interested in the multiple aspects of health throughout the State. Such a committee might logically save much waste motion occasioned by lack of concentrated effort. Even though this committee would have no power to act, an exchange of ideas should prove most valuable in solving future health problems.

Bringing together the various agencies of the National Government concerned with Health, some thirty-two in all, under one head, dignifying this position with cabinet rank and appointing a physician to that office seems inevitable. Therefore, our active support of the principle should be given. Indeed, we might seriously think of a similar set-up in our State organization, centralizing all of the efforts in caring for the physical welfare of the citizens of this Commonwealth.

Several changes in the by-laws were discussed. 1. Abrogation of the rule which prevents the election of a physician living in the place of the annual meeting to the presidency. 2. Make the retiring president a member of the Council. 3. Have the annual address made by the President-elect. These will be referred to the Judicial Committee for study and recommendations.

In view of the recent ruling from the Office of Defense Transportation with reference to meetings, considerable discussion took place over our proposed annual meeting in the Fall. The concensus of opinion was that no request to hold such a meeting should be made unless transportation conditions changed materially for the better by May 1st.

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At any rate, a request to hold a meeting of the House of Delegates will be made. Should this be refused, the Council will meet and transact the business of the Society.

Not discussed in the Council but of considerable importance is the introduction of a recent bill in Congress by Representatives Hill and Burton, which provides for a survey of the present hospital facilities in the United States and an appropriation of $100,000,000 for help in the construction of non-profit hospitals throughout the country. These will be improved and constructed according to the need as indicated by the preliminary survey. The term "hospital" is broadly interpreted and includes so-called "Health Centers" in rural areas. The bill is now in Committee.

Each and every one of you is asked to concern yourselves with the rapidly changing stage of medical care and to take an active, positive interest in solving these important problems.

H. B. MULHOLLAND, M.D.

Societies

Virginia State Board of Medical Examiners.

The following applicants were granted licenses to practice medicine at the meeting of the Board held September 19-22, 1945:

Dr. Jane Beery Adams, Richmond.
Dr. Raymond Atwell Adams, Richmond.
Dr. Nathaniel Edward Adamson, Jr., Charlottesville.
Dr. Leon Harper Alexander, Petersburg.
Dr. Woodland Ward Anderson, Bethlehem, Pa.
Dr. Jerome E. Andes, Pulaski.
Dr. Robert Eugene Balsley, Charlottesville.
Dr. Earl McKenzie Bane, Charles Town, W. Va.
Dr. Norvell Belt, Washington, D. C.
Dr. Henry Bernstein, Bethesda, Md.
Dr. Geoffrey H. Binneveld, Charlottesville.
Dr. William Branch Bishop, Richmond.
Dr. Robert E. Blount, Ft. Lauderdale, Fla.
Dr. Robert F. Bondurant, Roanoke.
Dr. Irving Bornstein, Welfare Island, N. Y.
Dr. James Horace Boyd, Norfolk.
Dr. Charles Bunyan Bray, Jr., Galveston, Texas.
Dr. William M. Brock, Newport, R. I.
Dr. Waldo Emerson Burnett, Arlington.
Dr. Alvin Lafayette Cain, Fairmont, W. Va.
Dr. James Leonidas Camp, III, Franklin.
Dr. Mathew Lee Carr, LaGrange, N. C.
Dr. L. Huntley Cate, Arlington.
Dr. Matilda Daugherty Chalkley, Richmond.
Dr. Walter Randolph Chitwood, Charlottesville.
Dr. Oscar Withers Clarke, Jr., Petersburg.
Dr. Edgar Lawrence Compton, Washington, D. C.
Dr. George Marion Cooper, Cincinnati, Ohio.
Dr. Otis Wilson Corder, Huntington, W. Va.
Dr. Charles Granville Craddock, Jr., Rochester, N. Y.
Dr. Bennett Rudolph Creech, Philadelphia, Pa.
Dr. Courtland Harwell Davis, Jr., Alexandria.
Dr. Thomas Newman Davis, III, Bethlehem, Pa.
Dr. William Cole Davis, Lexington.
Dr. Joseph Jenkins Delfino, Norfolk.
Dr. Robert Russell Dennison, Richmond.
Dr. Federico M. Diez-Rivas, Richmond.
Dr. Helen Dorsey, Hampton.
Dr. Hubert U. Dougan, Richmond.
Dr. Alonzo Watt Douglas, Newport News.
Dr. Clyde H. Dougherty, Franklin.
Dr. Arthur Baldwin Duel, Jr., Charlottesville.
Dr. Gershon Gerald Ediss, Richmond.
Dr. Rufus Purdum Ellett, Jr., Richmond.
Dr. Norris Scribner, Erb, Malvern, Ark.
Dr. Gustaf Walter Erickson, Jr., New York, N. Y.
Dr. Walter A. Eskridge, Oteen, N. C.
Dr. Stanton Lee Eversole, Jr., Charlottesville.
Dr. James Allen Farley, Huntington, W. Va.
Dr. Cecil Glen Finney, Richmond.
Dr. Franklin Fite, Norfolk.
Dr. Darius Flinchum, Willis.
Dr. Merritt Woodhull Foster, Jr., Madison, Wis.
Dr. Claude Albee Frazier, Winona, W. Va.
Dr. Herbert Pincus Friedman, Jr., Charlottesville.
Dr. Robert Joseph Frost, Washington, D. C.
Dr. Herbert Winston, Frostick, Charlotte, N. C.
Dr. Abraham Julian Gabriele, Dayton, Ohio.
Dr. Edgar Clyde Garber, Jr., Richmond.
Dr. Charles Mayo Garland, Jr., Chattanooga, Tenn.
Dr. Macbeth Roy Gasque, Jr., Charlottesville.
Dr. Frank Wilson Gearing, Jr., Richmond.
Dr. John Edward George, Roanoke.
Dr. Norman Goldfarb, Brooklyn, N. Y.
Dr. William M. Goldsmith, Hampton.
Dr. Zoltan Gondos, Norfolk.
Dr. Harold Goodman, Richmond.
Dr. John Milton Gouldin, Tappahannock.
Dr. Joseph Francis Graceffo, Washington, D. C.

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Dr. John Roy Gregory, Queens Village, N. Y.
Dr. Robert Charles Haile, Washington, D. C.
Dr. Edward N. Hamacher, Washington, D. C.
Dr. Arthur Lawson Hardie, Jr., Jacksonville, Fla.
Dr. Gordon Fletcher Harrell, Norfolk.
Dr. James J. Harris, Yorktown.
Dr. Barry Fugh Hawkins, Shreveport, La.
Dr. Louis DeMaro Hayman, Jr., Whiteville, N. C.
Dr. Glenn Gordon Hendrickson, Charlottesville.
Dr. Lucius Davis Hill, III, Charlottesville.
Dr. Robert Glenn Holt, Winston-Salem, N. C.
Dr. Wesley Merle Hoppenrath, Yorktown.
Dr. Melvin Lawrence Horne, Newport News.
Dr. Charles Dotson Houck, Richmond.
Dr. Thomas Carroll Iden, Berryville.
Dr. Joseph Frasia Jones, Jr., Richmond.
Dr. Robert Louis Keeley, Roanoke.
Dr. Guy Otis Keller, Buena Vista.
Dr. Douglas Oliver Kern, Wilmington, Del.
Dr. Margueritte Elizabeth Kersey, Richmond.
Dr. William Ward Kersey, Jr., Richmond.
Dr. John Kilday, Alexandria.
Dr. Charlton Roper King, Arlington.
Dr. Robert Kinnaird, Jr., Richmond.
Dr. Herman Melvin Kunkle, Knoxville, Tenn.
Dr. James William Lambdin, Richmond.
Dr. Ludwig George Lederer, Arlington.
Dr. Ralph Michael LeComte, Washington, D. C.
Dr. Parker Hall Lee, Jr., Charlottesville.
Dr. Wallace Byron (Pete) Lilly, Beckley, W. Va.
Dr. John David Lindner, Jacksonville, Fla.
Dr. Samuel Woolston Lippincott, Jr., Baltimore, Md.
Dr. James William Loynd, II, Brackenridge, Pa.
Dr. Charles Hamilton Lupton, Jr., Norfolk.
Dr. David Israel Macht, Emory.
Dr. Fred Coleman Mackler, New York, N. Y.
Dr. Hunter Reece Mann, Jr., Charlottesville.
Dr. William Berry Marbury, Jr., Boston, Mass.
Dr. William J. Martin, Arlington.
Dr. Edward Nisbet Maxwell, Davidson, N. C.
Dr. Wendell D. McCollum, Staten Island, N. Y.
Dr. Olin Richard Melchionna, Roanoke.
Dr. Karl Ferdinand Menk, Charlottesville.
Dr. Helen Thedocia Mewborn, Portsmouth.
Dr. Joseph Albert Miller, Yorktown.
Dr. Ray Donald Minges, Richmond.
Dr. Benjamin Franklin Montague, Charleston, W. Va.
Dr. Cary Nelson Moon, Jr., Newport, R. I.
Dr. Ray Atkinson Moore, Jr., Richmond.
Dr. William Donald Moore, Cary, N. C.
Dr. Silas Mercer Moorman, II, Lexington, Ky.
Dr. Robert Holcombe Morrison, Petersburg.
Dr. William Philip Morrisette, Richmond.
Dr. Ernest Lewis Mrkvicka, Jr., Richmond.
Dr. Marcus Nakdimen, Brooklyn, N. Y.
Dr. Alva Denton Orr, Charlottesville.
Dr. Roy Turnage Parker, Pinetops, N. C.
Dr. Nelson Saunders Payne, Norfolk.
Dr. Eugene Goodbred Peek, Jr., Richmond.
Dr. Harry James Perlberg, Jr., Jersey City, N. J.
Dr. Abraham Perlman, Brookline, N. Y.
Dr. Randolph Preston Pillow, Seattle, Wash.
Dr. James DeCamp Piver, Richmond.
Dr. Harold Sidney Rafal, Richmond.
Dr. Sidney Cohn Reichman, Charlottesville.
Dr. Lonnie Titus Reid, Suffolk.
Dr. Elmer Walter Rice, Binghamton, N. Y.
Dr. Marion Lee Rice, Jr., Richmond.
Dr. Peter Rosanelli, Richmond.
Dr. Macey Herschel Rosenthal, Lynchburg.
Dr. Carlos James Ross, Birmingham, Ala.
Dr. William Anderson Sadler, Richmond.
Dr. Robert Swynn, Schultz, Richmond.
Dr. David Kalbach Shivelhood, Petersburg.
Dr. Bernard Randolph Siegel, Newport News.
Dr. Christian Fogle Siewers, Winston-Salem, N. C.
Dr. Isadore Shapiro, Norfolk.
Dr. Jack Stone Shaver, Woodstock.
Dr. Robert Craig Shelburne, Christianburg.
Dr. Morton Jack Silk, Bayonne, N. J.
Dr. Hal Waugh Smith, Montgomery, W. Va.
Dr. Oscar Orton Smith, Jr., Richmond.
Dr. Wilbur Forrest Smith, Alexandria.
Dr. James Given Snead, Covington.
Dr. Harry Yandell Spence, Richmond.
Dr. William Price Spencer, Charlottesville.
Dr. William Calhoun Stirling, Washington, D. C.
Dr. Royal Eppes Stuart, Galveston, Texas.
Dr. Daniel D. Talley, III, Richmond.
Dr. Gervas Storrs Taylor, Jr., Richmond.
Dr. William Sanford Terry, Chatham.
Dr. James Tidler, Richmond.
Dr. Gordon Clark G. Thomas, Charlottesville.
Dr. John Warrick Thomas, Richmond.
Dr. Robert Henry Thrasher, Raleigh, N. C.
Dr. Robert Palmer Trice, Richmond.
Dr. Grattan Howard Tucker, Jr., Chase City.
Dr. Richard Turin, Brooklyn, N. Y.
Dr. Edward Alton Tyler, Brooklyn, N. Y.
Dr. Graham Alexander Vance, Baltimore, Md.
Dr. Jesse O. Van Meter, Jr., Jackson, Ky.
Dr. Charles William Vivian, Phoenix, Ariz.
Dr. John Barrett Walker, Jr., Richmond.
Dr. Peter A. Wallenborn, Jr., Charlottesville.
Dr. Marion Louise Whalin, Waynesboro.
Dr. Carl W. White, Colony.
Dr. Nancy Safford Whitticar, Fredericksburg.
Dr. Walter Richmond Wilkinson, New Orleans, La.
Dr. John J. Williams, Alexandria.
Dr. Joseph Franklin Wilson, Richmond.
Dr. Jean Fennell Wine, Harrisonburg.
Dr. Henry Adolphus Wiseman, III, Danville.
Dr. John Peter Wissinger, Cincinnati, Ohio.
Dr. Payl Andrew Woods, Lynchburg.
Dr. Charles Edward Woodson, Jr., Bethesda, Md.
Dr. Edwin Snead Wysor, Clifton Forge.
Dr. John Elmer Zearfoss, Jr., Charlottesville.
Dr. Hyman Samuel Zfass, Richmond.

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Dr. Joseph Percivall Whittle, Charlottesville.
Dr. Anibal Roberto Valley, Washington, D. C.

HOMEOPATHS

Dr. Earl Homer Kirk, Richlands.
Dr. Forney Drew Winner, Norton.

The Tazewell County Medical Society

Met in North Tazewell on January 25 with the president, Dr. J. W. Witten, presiding. Others present were Drs. C. G. Bennett, Rufus Brittain, Ashby Coleman, M. B. Crockett, J. N. Higginbotham, W. C. Jackson, Mary Elizabeth Johnston, E. H. Kirk, A. D. Parson, H. A. Porter, J. A. Robinson, W. R. Strader, C. T. St.Clair, Sr., Hampton St.Clair and Wade St.Clair.

Motion picture films demonstrating the technique of the modern treatment of second and third degree burns were shown, and Dr. Hampton St.Clair, member of the Bluefield Sanitarium staff, presented a paper on this same subject, discussing and describing in interesting detail the advantages of the various types of treatment and management of cases of severe burns.

Dr. C. G. Bennett of Bishop was installed to serve as president of the Society for the next twelve months.

J. A. ROBINSON, *Secretary.*

News

Medical College of Virginia News.

The annual Stuart McGuire lectures will be held on April 5 and 6 in the Simon Baruch Auditorium at 8:00 P. M. Dr. R. H. Smithwick of the Massachusetts General Hospital will be the McGuire lecturer. The program for the postgraduate clinics and the subject of Dr. Smithwick's lectures will be announced in March in an invitation to members of the medical profession in Virginia.

Dr. C. C. Coleman, professor of neurological surgery, has been appointed one of the three civilian consultants in the United States to the Surgeon General of the Army.

Dr. Selman A. Waksman on March 15 will give the annual Phi Beta Pi lecture at the college.

Dr. John C. Forbes, research professor of biochemistry, made an address on Proteins in Nutrition before the Virginia Section of the American Chemical Society on February 16.

Mr. Clifton B. Cosby has been appointed assistant professor of biophysics in the Baruch Center of Physical Medicine.

Major William E. Tidmore has been reassigned and Captain W. T. Hughes has been appointed Commandant of the A.S.T.P. unit at the college.

Dr. Lester J. Evans of the Commonwealth Fund was a recent guest at the college.

Dr. I. A. Bigger, professor of surgery, and Dr. William B. Porter, professor of medicine, will attend the meeting of the Cabell County Medical Society, Huntington, West Virginia, on March 8. They will discuss the physiologic aspects of arterio-venous fistula.

Dr. Milton C. Richards,

Class of '37, Medical College of Virginia, who has been located for sometime at Goldsboro, N. C., announces the opening of an office in the Medical Arts Building, Richmond, for the practice of general surgery.

Dr. John F. Cadden,

Connected for sometime with the American Viscose Corporation in Roanoke, has been transferred to the Wilmington, Delaware, offices, where he is assistant Medical Director for the Corporation.

Army Medical Officers Rescued on Luzon.

Twenty-one officers of the Army Medical Department, including 13 doctors, 3 medical administrative officers, 4 dentists and a veterinary officer were named in the first list of prisoners freed from Camp Cabanatuan on Luzon, according to the Office of The Surgeon General. The list of those freed from Santo Tomas University, Manila, included 66 nurses, a physical therapist and a hospital dietitian.

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The full list of freed prisoners has not yet been officially released.

Married.

Lt. (jg) Robert Gwyn Schultz, MC., USNR., and Miss Edna Lee Schaaf, both of Richmond, January 30. He is a graduate of the Medical College of Virginia, class of '44, and is at present stationed at the U. S. Naval Hospital in Key West, Florida.

Lt. William Winfree Farley, M.C., of the December 1943 class, Medical College of Virginia, and Miss Rachael Gilbert Smith of Kings Mountain, N. C., January 20. Lt. Farley is at present stationed at Camp Bowie, Texas.

Dr. Francis W. Upshur

Has resigned his position with the Eastern State Hospital at Williamsburg and returned to Richmond where he is working in Neuro-Psychiatry at the Induction Center.

Dr. R. S. Griffith,

Waynesboro, was one of fifteen railroad veterans, all of whom had worked for the Norfolk and Western Railroad for fifty years or more, who was presented with the Diamond Insignia of the N. & W. Veterans Association, in Roanoke, on January 20. Dr. Griffith has been in continuous service with the railroad as consulting surgeon since January 1, 1894.

Dental Needs of Returned Soldiers.

A redistribution station in this country, where soldiers just returned from overseas receive dental treatment, has reported to the Office of The Surgeon General that about one man in ten needs an extraction or other emergency dental treatment. This includes the construction of a denture if the man hasn't enough teeth to chew an average meal. According to this report, about 45 per cent of the men returning from overseas need one or more fillings while about 40 per cent do not require any dental treatment. Figures previously released by the Dental Division, Office of The Surgeon General, show that about one man in every four requires emergency dental treatment at the time of induction.

Dr. T. H. Valentine,

Lawrenceville, has been named a member of the board of directors of the local Chamber of Commerce.

Wanted:

A nurse anesthetist for small private hospital; salary open; pleasant working conditions. Address "Anesthetist", care VIRGINIA MEDICAL MONTHLY, 1200 East Clay Street, Richmond 19, Va. (*Adv.*)

Obituaries

Dr. Benjamin Roscoe Gary,

Well known physician of Newport News, died February 11. He was a native of King William County and seventy-six years of age. Dr. Gary was a graduate in medicine from the University of Maryland, class of 1891, and had practiced in Newport News for more than fifty years. He had been a member of the Medical Society of Virginia since 1893. His wife, a son, and three daughters survive him.

Dr. Michael W. Minor,

Comorn, died January 31. He was seventy-seven years of age and received his medical degree from the University of Maryland in 1891. Dr. Minor had practiced in King George County for fifty-two years. He was a member of the Medical Society of Virginia. His wife, a son and two daughters survive him.

Dr. Aubry Cheatham Belcher,

Richmond, died at his home in this city on February 18, after a short illness. He was a native of Chesterfield County and fifty-five years of age. Following graduation from the Medical College of Virginia in 1916, Dr. Belcher took up special work at the Mayo Clinic, Rochester, Minn., and served on the staffs of several hospitals before locating for practice in Richmond. He was a member of his local and State medical societies and had taken an active interest in civic affairs in his section of the city. His wife, father and a son survive him.

Dr. William H. Howell,

Internationally known physiologist of Baltimore, died February 6, at the age of eighty. He was one of the early directors of the Johns Hopkins School of Hygiene and Public Health, having retired about ten years ago. Dr. Howell had also served on the faculties at the University of Michigan and at Harvard.

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